

SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: Nicole Barrera Examiner #: 76619 Date: 2/5/02
 Art Unit: 1756 Phone Number 308-7968 Serial Number: 09/924,045
 Mail Box and Bldg/Room Location: 9D29 Results Format Preferred (circle) PAPER DISK E-MAIL
CP3

If more than one search is submitted, please prioritize searches in order of need.

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: Anti halation compositions
 Inventors (please provide full names): James E. Thackeray,
George W. Orsula
 Earliest Priority Filing Date: 4/30/96

For Sequence Searches Only Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.

Con of 08/640,144 (4/30/96)

- an antireflective composition comprising a benzoguanamine crosslinker

- an antireflective composition comprising a crosslinker and an anthracene material

STAFF USE ONLY

	Type of Search	Vendors and cost where applicable
Searcher: <u>EN</u>	NA Sequence (#) _____	STN <u>1108.70</u>
Searcher Phone #: _____	AA Sequence (#) _____	Dialog _____
Searcher Location: _____	Structure (#) <u>(2)</u>	Questel/Orbit _____
Date Searcher Picked Up: _____	Bibliographic <u>(2)</u>	Dr. Link _____
Date Completed: <u>2-13-02</u>	Litigation _____	Lexis/Nexis _____
Searcher Prep & Review Time: <u>10</u>	Fulltext _____	Sequence Systems _____
Clerical Prep Time: _____	Patent Family _____	WWW/Internet _____
Online Time: <u>75</u>	Other _____	Other (specify) _____

=> d l18 1-13 cbib abs hitstr hitind

L18 ANSWER 1 OF 13 HCA COPYRIGHT 2002 ACS

135:373027 Interdiffusion vs **Cross-Linking** Rates in

Isobutoxyacrylamide-Containing Latex Coatings. Liu, Ronghua; Winnik, Mitchell A.; Di Stefano, Frank; Vanketessan, Jai (Department of Chemistry, University of Toronto, Toronto, ON, M5S 3H6, Can.). Macromolecules, 34(21), 7306-7314 (English) 2001. CODEN: MAMOBX. ISSN: 0024-9297. Publisher: American Chemical Society.

AB We describe the relative rates of polymer diffusion and **crosslinking** in a latex film contg. 2 wt% (1.3 mol%) of N-(isobutoxymethyl)acrylamide (IBMA) as a **crosslinking** agent. The latex base monomer is a 4:5 wt. ratio copolymer of Bu acrylate and Me methacrylate (BA-MMA) with a glass transition temp. of 12 .degree.C. Polymer diffusion was monitored by direct energy transfer (ET) in films prep'd. from latex particles labeled with phenanthrene as the donor and anthracene as the acceptor. In a model film without IBMA, the quantum yield for ET increased to its max. value of 0.62 in a few minutes at 120 .degree.C, whereas at 80 .degree.C the films required hours of annealing to achieve full mixing. The temp. dependence of the diffusion rate indicated an effective activation energy of 43 kcal/mol. In contrast, a film prep'd. from latex of similar mol. wt. contg. 2 wt% IBMA formed gel rapidly at 80 .degree.C in the presence of 0.5 wt% toluenesulfonic acid. The system reached its max. gel content over 40 min. Diffusion was retarded over all annealing times, but after 20 min at 80 .degree.C, when the gel content was 60%, polymer diffusion ceased. If one uses a weaker acid, e.g., phosphoric acid instead of PTSA, the **crosslinking** rate is slower, whereas the polymer diffusion rate, prior to extensive gel formation, is not very much affected.

IT 373626-96-1 373627-01-1 373627-06-6

(interdiffusion vs. **crosslinking** rates in

(isobutoxymethyl)acrylamide-contg. Bu acrylate-Me methacrylate-based latex coatings)

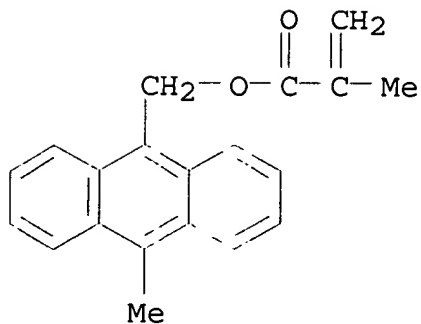
RN 373626-96-1 HCA

CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with butyl 2-propenoate, (10-methyl-9-anthracenyl)methyl 2-methyl-2-propenoate and N-[(2-methylpropoxy)methyl]-2-propenamide (9CI) (CA INDEX NAME)

CM 1

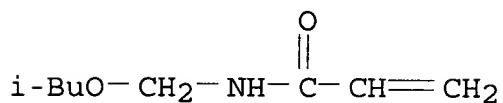
CRN 57504-09-3

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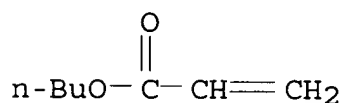
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CRN 16669-59-3
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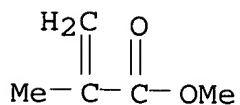
CM 3

CRN 141-32-2
 CMF C7 H12 O2



CM 4

CRN 80-62-6
 CMF C5 H8 O2

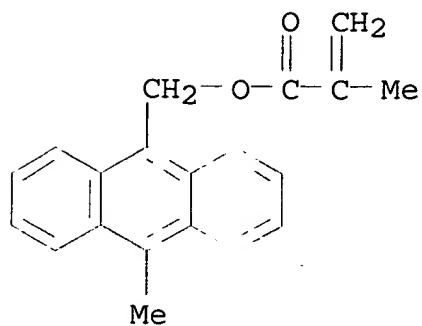


RN 373627-01-1 HCA
 CN 2-Propenoic acid, 2-methyl-, polymer with butyl 2-propenoate,
 (10-methyl-9-anthracenyl)methyl 2-methyl-2-propenoate, methyl
 2-methyl-2-propenoate and N-[(2-methylpropoxy)methyl]-2-propenamide
 (9CI) (CA INDEX NAME)

CM 1

CRN 57504-09-3

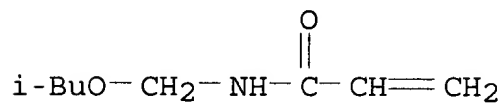
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CM 2

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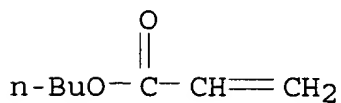
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CM 3

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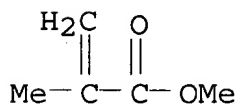
CMF C7 H12 O2



CM 4

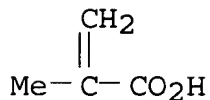
CRN 80-62-6

CMF C5 H8 O2



CM 5

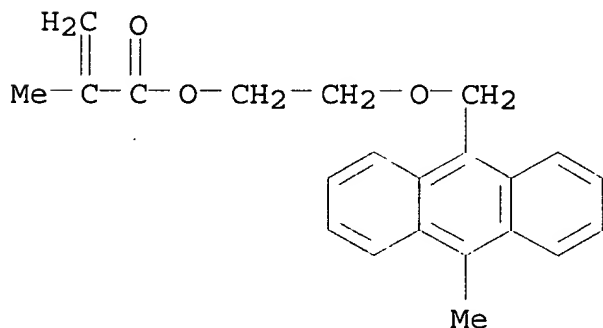
CRN 79-41-4
CMF C4 H6 O2



RN 373627-06-6 HCA
CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with butyl
2-propenoate, 2-[(10-methyl-9-anthracenyl)methoxy]ethyl
2-methyl-2-propenoate and N-[(2-methylpropoxy)methyl]-2-propenamide
(9CI) (CA INDEX NAME)

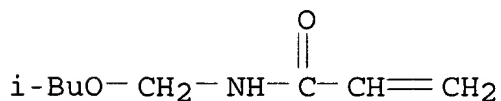
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CRN 345896-59-5
CMF C22 H22 O3



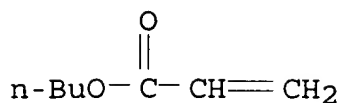
CM 2

CRN 16669-59-3
CMF C8 H15 N O2



CM 3

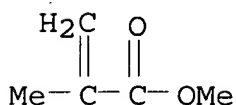
CRN 141-32-2
CMF C7 H12 O2



CM 4

CRN 80-62-6

CMF C5 H8 O2



- CC 42-4 (Coatings, Inks, and Related Products)
- ST interdiffusion **crosslinking** isobutoxymethylacrylamide
contg latex coating; methacrylate copolymer latex coating
interdiffusion **crosslinking**; acrylate copolymer latex
coating interdiffusion **crosslinking**; phosphoric acid
crosslinking catalyst isobutoxymethylacrylamide coating;
toluenesulfonic acid **crosslinking** catalyst
isobutoxymethylacrylamide coating
- IT Annealing
Crosslinking
Fluorescence decay
(interdiffusion vs. **crosslinking** rates in
(isobutoxymethyl)acrylamide-contg. Bu acrylate-Me methacrylate-
based latex coatings)
- IT Diffusion
(interdiffusion; interdiffusion vs. **crosslinking** rates
in (isobutoxymethyl)acrylamide-contg. Bu acrylate-Me
methacrylate-**based latex coatings**)
- IT **Coating materials**
(latex; interdiffusion vs. **crosslinking** rates in
(isobutoxymethyl)acrylamide-contg. Bu acrylate-Me methacrylate-
based latex coatings)
- IT **Crosslinking catalysts**
(phosphoric acid and toluenesulfonic acid; interdiffusion vs.
crosslinking rates in (isobutoxymethyl)acrylamide-contg.
Bu acrylate-Me methacrylate-**based latex**
coatings)
- IT 104-15-4, p-Toluenesulfonic acid, uses 7664-38-2, Phosphoric acid,
uses
(**crosslinking** catalysts; interdiffusion vs.
crosslinking rates in (isobutoxymethyl)acrylamide-contg.
Bu acrylate-Me methacrylate-**based latex**
coatings)
- IT 373626-93-8, Butyl acrylate-N-(isobutoxymethyl)acrylamide-methyl
methacrylate-9-phenanthrylmethyl methacrylate copolymer

373626-96-1 373626-99-4 373627-01-1

373627-03-3 373627-06-6

(interdiffusion vs. **crosslinking** rates in
(isobutoxymethyl)acrylamide-contg. Bu acrylate-Me methacrylate-
based latex coatings)

L18 ANSWER 2 OF 13 HCA COPYRIGHT 2002 ACS

133:18793 Polymer diffusion and mechanical properties of films prepared from **crosslinked** latex particles. Pineng, Patrick; Winnik, Mitchell A.; Ernst, Benoit; Juhue, Didier (Dept. of Chemistry, University of Toronto, Toronto, ON, M5S 3H6, Can.). J. Coat. Technol., 72(903), 45-61 (English) 2000. CODEN: JCTEDL. ISSN: 0361-8773. Publisher: Federation of Societies for Coatings Technology.

AB We describe energy transfer (ET) measurements to follow polymer diffusion, as well as oscillatory dynamic mech. measurements and tensile measurements, on films prep'd. from structured and unstructured latex particles consisting of a copolymer of Bu methacrylate and Bu acrylate with a Tg of 20.degree.C. Structure was introduced in the form of a low level (1 mol%) of **crosslinking**, using seeded semi-continuous emulsion polymn. to control the locus of the **crosslinking** agent in the particles. Linear dynamic mech. measurements showed the G' and G'' were sensitive to the particle morphol., with particular sensitivity exhibited by the elastic modulus G'. The tensile properties were less sensitive to particle morphol.; sufficient polymer diffusion occurs during film formation for the films to acquire strength and toughness. As expected, **crosslinking** increases strength but decreases elongation to break. Some interesting compromises could be found through control of the location of the **crosslinked** regions of the film.

IT 272126-65-5, 9-Anthryl methacrylate-butyl acrylate-butyl methacrylate-ethylene glycol dimethacrylate copolymer (polymer diffusion and mech. properties of films prep'd. from **crosslinked** latex particles)

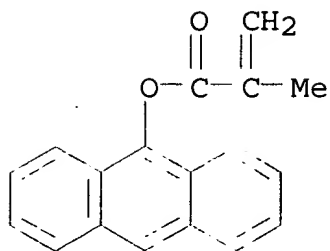
RN 272126-65-5 HCA

CN 2-Propenoic acid, 2-methyl-, 1,2-ethanediyl ester, polymer with 9-anthracenyl 2-methyl-2-propenoate, butyl 2-methyl-2-propenoate and butyl 2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 32468-70-5

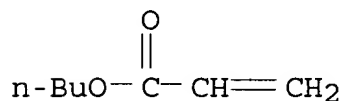
CMF C18 H14 O2



CM 2

CRN 141-32-2

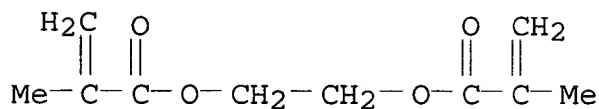
CMF C7 H12 O2



CM 3

CRN 97-90-5

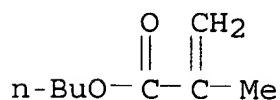
CMF C10 H14 O4



CM 4

CRN 97-88-1

CMF C8 H14 O2



CC 42-4 (Coatings, Inks, and Related Products)

Section cross-reference(s): 37

ST **crosslinked** latex coating diffusion mech property

IT Elongation, mechanical

(at break; polymer diffusion and mech. properties of films prepd.
from **crosslinked** latex particles)

IT Viscoelasticity

- (dynamic; polymer diffusion and mech. properties of films prepd. from **crosslinked** latex particles)
- IT **Coating materials**
(latex; polymer diffusion and mech. properties of films prepd. from **crosslinked** latex particles)
- IT Diffusion
Mechanical loss
Particle shape
Stress-strain relationship
Tensile strength
Toughness
(polymer diffusion and mech. properties of films prepd. from **crosslinked** latex particles)
- IT Interpenetrating polymer networks
(semi-interpenetrating; polymer diffusion and mech. properties of films prepd. from **crosslinked** latex particles)
- IT 84086-20-4, Butyl acrylate-butyl methacrylate-ethylene glycol dimethacrylate copolymer 272126-64-4, Butyl acrylate-butyl methacrylate-ethylene glycol dimethacrylate-9-vinylphenanthrene copolymer 272126-65-5, 9-Anthryl methacrylate-butyl acrylate-butyl methacrylate-ethylene glycol dimethacrylate copolymer (polymer diffusion and mech. properties of films prepd. from **crosslinked** latex particles)

L18 ANSWER 3 OF 13 HCA COPYRIGHT 2002 ACS

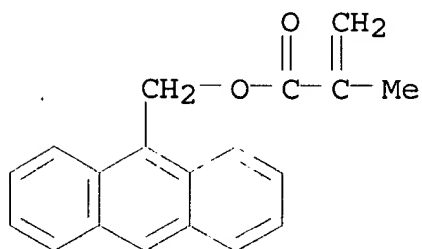
- 132:100455 Compositions containing blocked isocyanates for light absorption films and **antireflection** films therefor. Kang, Wen-Bing; Kimura, Ken; Matsuo, Shoko; Nishiwaki, Yoshinori; Tanaka, Hatsuyuki (Clariant International Ltd., Switz.). PCT Int. Appl. WO 2000001752 A1 20000113, 27 pp. DESIGNATED STATES: W: CN, JP, KR, US; RW: DE, FR, GB, IT. (Japanese). CODEN: PIXXD2. APPLICATION: WO 1999-JP3332 19990623. PRIORITY: JP 1998-188380 19980703.
- AB The compn. having good storage stability, comprises a light-absorbing polymer or compd. (e.g., 2-acetoacetoxyethyl methacrylate-9-anthrylmethyl methacrylate copolymer), and a **crosslinking** agent having blocked isocyanate groups (e.g., 2-butanone oxime-blocked 2-isocyanatoethyl methacrylate-Me methacrylate copolymer). **Antireflection** film, which is free from the diffusion of a photo-generated acid into the film or the intermixing of a resist with the film, is formed by applying the compn. to a substrate and heat curing the compn.
- IT **254756-21-3P**, 2-Acetoacetoxyethyl methacrylate-9-anthrylmethyl methacrylate-2-isocyanatoethyl methacrylate-methyl methacrylate copolymer **254756-22-4P** **254756-23-5P**, 9-Anthrylmethyl methacrylate-benzyl methacrylate-ethylene glycol methacrylate-2-isocyanatoethyl methacrylate copolymer **254756-25-7P**
(compns. contg. blocked isocyanates for light absorption films and **antireflection** films therefor)
- RN **254756-21-3** HCA
- CN Butanoic acid, 3-oxo-, 2-[(2-methyl-1-oxo-2-propenyl)oxy]ethyl ester, polymer with 9-anthracenylmethyl 2-methyl-2-propenoate,

2-isocyanatoethyl 2-methyl-2-propenoate and methyl
2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 31645-35-9

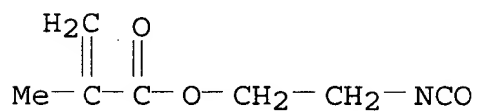
CMF C19 H16 O2



CM 2

CRN 30674-80-7

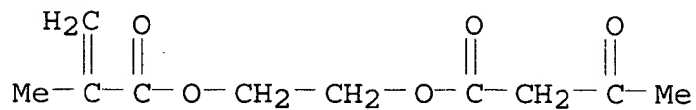
CMF C7 H9 N O3



CM 3

CRN 21282-97-3

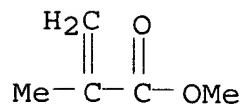
CMF C10 H14 O5



CM 4

CRN 80-62-6

CMF C5 H8 O2



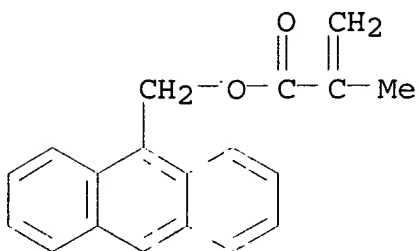
RN 254756-22-4 HCA

CN 2-Propenoic acid, 2-methyl-, 9-anthracenylmethyl ester, polymer with
 2-hydroxyethyl 2-methyl-2-propenoate, 2-isocyanatoethyl
 2-methyl-2-propenoate and methyl 2-methyl-2-propenoate (9CI) (CA
 INDEX NAME)

CM 1

CRN 31645-35-9

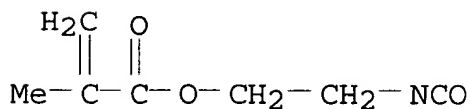
CMF C19 H16 O2



CM 2

CRN 30674-80-7

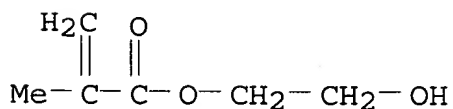
CMF C7 H9 N O3



CM 3

CRN 868-77-9

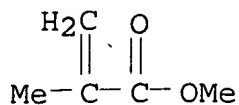
CMF C6 H10 O3



CM 4

CRN 80-62-6

CMF C5 H8 O2



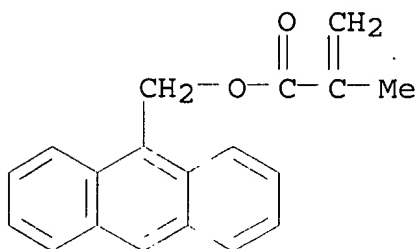
RN 254756-23-5 HCA

CN 2-Propenoic acid, 2-methyl-, 9-anthracenylmethyl ester, polymer with 2-hydroxyethyl 2-methyl-2-propenoate, 2-isocyanatoethyl 2-methyl-2-propenoate and phenylmethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 31645-35-9

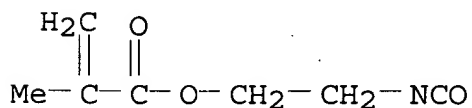
CMF C19 H16 O2



CM 2

CRN 30674-80-7

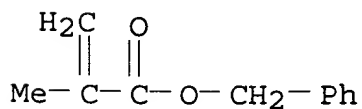
CMF C7 H9 N O3



CM 3

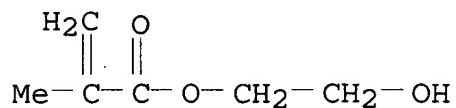
CRN 2495-37-6

CMF C11 H12 O2



CM 4

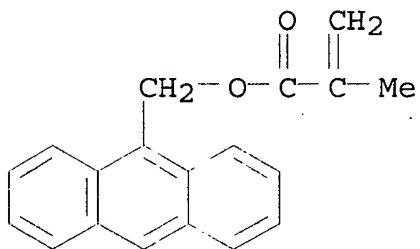
CRN 868-77-9
CMF C6 H10 O3



RN 254756-25-7 HCA
CN Butanoic acid, 3-oxo-, 2-[(2-methyl-1-oxo-2-propenyl)oxy]ethyl ester, polymer with 9-anthracenylmethyl 2-methyl-2-propenoate, diisocyanatobenzene and formaldehyde (9CI) (CA INDEX NAME)

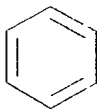
CM 1

CRN 31645-35-9
CMF C19 H16 O2



CM 2

CRN 27359-20-2
CMF C8 H4 N2 O2
CCI IDS
CDES 8:ID

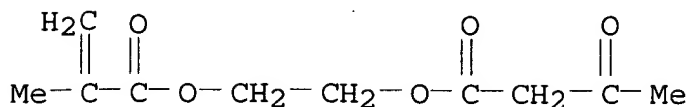


2 (D1-NCO)

CM 3

CRN 21282-97-3

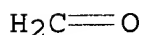
CMF C10 H14 O5



CM 4

CRN 50-00-0

CMF C H2 O



- IC ICM C08G018-80
ICS C09D175-04; G02B001-10; G03F007-00
- CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 38
- ST blocked isocyanate light absorption polymer storage stability;
antireflection light absorption film
- IT **Antireflective** films
Photoresists
Semiconductor devices
(compns. contg. blocked isocyanates for light absorption films and **antireflection** films therefor)
- IT 254756-21-3P, 2-Acetoacetoxyethyl methacrylate-9-anthrylmethyl methacrylate-2-isocyanatoethyl methacrylate-methyl methacrylate copolymer 254756-22-4P 254756-23-5P, 9-Anthrylmethyl methacrylate-benzyl methacrylate-ethylene glycol methacrylate-2-isocyanatoethyl methacrylate copolymer 254756-24-6P 254756-25-7P
(compns. contg. blocked isocyanates for light absorption films and **antireflection** films therefor)
- IT 96-29-7DP, 2-Butoxime, reaction products with isocyanate-contg. acrylic polymers 100042-81-7DP, 2-Isocyanatoethyl methacrylate-methyl methacrylate copolymer, 2-butanone oxime-blocked 254756-19-9DP, Benzyl methacrylate-2-isocyanatoethyl methacrylate copolymer, 2-butanone oxime-blocked 254756-20-2DP, 2-butanone oxime-blocked
(**crosslinking** agent; compns. contg. blocked isocyanates for light absorption films and **antireflection** films therefor)

L18 ANSWER 4 OF 13 HCA COPYRIGHT 2002 ACS
132:3678 Polymer Interdiffusion vs. **Cross-Linking** in Carboxylic Acid-Carbodiimide Latex Films. Pham, Hung H.; Winnik, Mitchell A. (Department of Chemistry, University of Toronto, Toronto, ON, M5S 3H6, Can.). Macromolecules, 32(22), 7692-7695

(English) 1999. CODEN: MAMOBX. ISSN: 0024-9297. Publisher: American Chemical Society.

AB The relative rates of polymer diffusion and of covalent bond formation were studied in latex blend films of a 1:1 mixt. of a carbodiimide-contg. polymer and a carboxylic acid-contg. polymer. The carbodiimide-contg. latex is {poly(ethylhexyl methacrylate-co-tert-butylcarbodiimidoethyl methacrylate-co-anthryl methacrylate) [P(EHMA-co-tBCEMA-co-AnMA)]} and the carboxylic acid-contg. latex {poly(ethylhexyl methacrylate-co-methacrylic acid-co-phenanthrylmethyl methacrylate) [P(EHMA-co-MAA-co-PheMMA)]}. All latex dispersions were prep'd. by seeded emulsion polymn. using common seed 8% of the final particle mass, with the fluorescent (1 mol %) and reactive (5%) comonomers being introduced in the second stage under monomer-starved conditions and using dodecyl mercaptan as chain-transfer agent. In this system in which the mol. wt. (Mw .apprx. 60 000) of both components is relatively low, polymer diffusion is significantly faster than the rate of the chem. reaction between the -N:C:N- and -COOH groups. A subtle feature of the system is that the two reactive copolymers have only limited miscibility but become miscible as a consequence of the chem. reaction. The tech. implications of this competition in formulation of waterborne coatings are outlined.

IT 251116-09-3P, 9-Anthryl methacrylate-tert-butylcarbodiimidoethyl methacrylate-2-ethylhexyl methacrylate copolymer
(interdiffusion vs. **crosslinking** of blends of acrylic-based carboxylic acid-carbodiimide latex films towards improvement waterborne coating formulations)

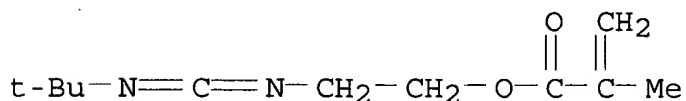
RN 251116-09-3 HCA

CN 2-Propenoic acid, 2-methyl-, 9-anthracenyl ester, polymer with 2-[[[(1,1-dimethylethyl)carbonimidoyl]amino]ethyl 2-methyl-2-propenoate and 2-ethylhexyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 162275-38-9

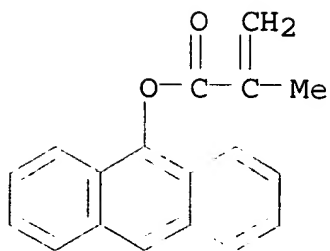
CMF C11 H18 N2 O2



CM 2

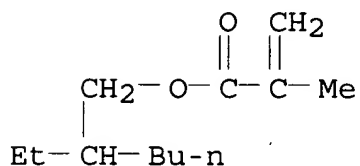
CRN 32468-70-5

CMF C18 H14 O2



CM 3

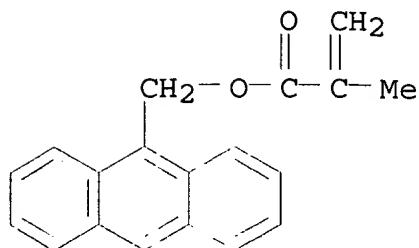
CRN 688-84-6
CMF C12 H22 O2



- CC 36-6 (Physical Properties of Synthetic High Polymers)
Section cross-reference(s): 35, 42
- ST carboxylic acid polymer carbodiimide interdiffusion
crosslinking competition; latex blend component polymer
interdiffusion rate; waterborne acrylic coating latex
crosslinking interdiffusion
- IT Polymerization
(emulsion; interdiffusion vs. **crosslinking** of blends of
acrylic-based carboxylic acid-carbodiimide latex films towards
improvement waterborne coating formulations)
- IT Chain transfer agents
Crosslinking
Latex
Miscibility
(interdiffusion vs. **crosslinking** of blends of
acrylic-based carboxylic acid-carbodiimide latex films towards
improvement waterborne coating formulations)
- IT Polymer blends
(interdiffusion vs. **crosslinking** of blends of
acrylic-based carboxylic acid-carbodiimide latex films towards
improvement waterborne coating formulations)
- IT Diffusion
(interdiffusion; interdiffusion vs. **crosslinking** of
blends of acrylic-based carboxylic acid-carbodiimide latex films
towards improvement waterborne coating formulations)
- IT **Coating materials**
(water-thinned; interdiffusion vs. **crosslinking** of
blends of acrylic-based carboxylic acid-carbodiimide latex films

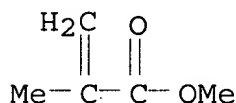
- towards improvement waterborne coating formulations)
- IT 112-55-0, Dodecyl mercaptan
(chain transfer agent; interdiffusion vs. **crosslinking**
of blends of acrylic-based carboxylic acid-carbodiimide latex
films towards improvement waterborne coating formulations)
- IT 251116-09-3P, 9-Anthryl methacrylate-tert-
butylcarbodiimidoethyl methacrylate-2-ethylhexyl methacrylate
copolymer 251116-10-6P, 2-Ethylhexyl methacrylate-methacrylic
acid-9-phenanthrylmethyl methacrylate copolymer
(interdiffusion vs. **crosslinking** of blends of
acrylic-based carboxylic acid-carbodiimide latex films towards
improvement waterborne coating formulations)
- L18 ANSWER 5 OF 13 HCA COPYRIGHT 2002 ACS
- 131:329749 Design of a new bottom **antireflective** coating
, composition for KrF resist. Mizutani, Kazuyoshi; Momota, Makoto;
Aoai, Toshiaki; Yagihara, Morio (Research Div. of Yoshida-Minami
Factory, Fuji Photo Film Co., Ltd., Haibara-gun Shizukoa, Japan).
Proc. SPIE-Int. Soc. Opt. Eng., 3678(Pt. 1, Advances in Resist
Technology and Processing XVI), 518-526 (English) 1999. CODEN:
PSISDG. ISSN: 0277-786X. Publisher: SPIE-The International Society
for Optical Engineering.
- AB A study for a new org. bottom **antireflective** coating
(BARC) compn. is described. A structural design of a
light-absorbing dye was most important because dye structure not
only plays a role in eliminating **reflection** from a
substrate but also shows influence on dry etch rate of BARC material
to a considerable extent. For example, an anthracene moiety with
large absorption at 248 nm had undesirable dry etch resistance.
3-Hydroxy-2-naphthoic acid moiety was found to be one of suitable
dyes for KrF BARC compns., and the polymer bearing the dye showed
enough absorbance and good erodibility in dry etch. The BARC
polymer was eroded as one and a half times faster than a novolak
resin, and a little faster than an anthracene incorporated polymer.
The result was discussed from the concepts of Ohnishi parameter and
the ring parameter for dry etch durability of resist materials.
BARC polymer should be thermoset by hard bake to eliminate
intermixing with resist compns. The BARC polymer bearing hydroxy
group which is useful for a **crosslinking** reaction was
thermoset in the presence of melamine-formaldehyde
crosslinker and an acid catalyst after baking over
200.degree..
- IT 33773-67-0, 9-Anthrylmethyl methacrylatemethyl methacrylate
copolymer
(design of a new bottom **antireflective** coating compn.
for KrF resist)
- RN 33773-67-0 HCA
- CN 2-Propenoic acid, 2-methyl-, 9-anthracenylmethyl ester, polymer with
methyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CRN 31645-35-9
CMF C19 H16 O2



CM 2

CRN 80-62-6
CMF C5 H8 O2



- CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 73
- ST **antireflective** coating compn photoresist
- IT **Antireflective** films
Etching kinetics
Optical properties
Optical **reflection**
Photoresists
(design of a new bottom **antireflective** coating compn. for KrF resist)
- IT Phenolic resins, properties
(novolak, xylenol; design of a new bottom **antireflective** coating compn. for KrF resist)
- IT 9003-20-7, PVA 24979-70-2, Poly(4-hydroxystyrene) 25086-15-1, Methacrylic acidmethyl methacrylate copolymer 26838-25-5, Benzyl methacrylate-methyl methacrylate copolymer **33773-67-0**, 9-Anthrylmethyl methacrylatemethyl methacrylate copolymer 65697-21-4, Benzyl methacrylate-methacrylic acid copolymer
(design of a new bottom **antireflective** coating compn. for KrF resist)

L18 ANSWER 6 OF 13 HCA COPYRIGHT 2002 ACS
131:145762 **Crosslinking** vs. interdiffusion rates in melamine-formaldehyde cured latex coatings: A model for waterborne automotive basecoat. Winnik, Mitchell A.; Pinenq, Patrick; Kruger, Christian; Zhang, Jianxin; Yaneff, Philip V. (University of Toronto, Can.). J. Coat. Technol., 71(892), 47-60 (English) 1999. CODEN:

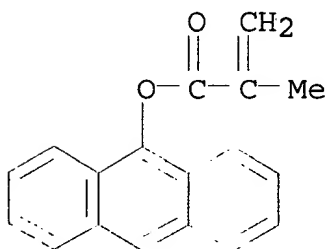
JCTEDL. ISSN: 0361-8773. Publisher: Federation of Societies for Coatings Technology.

- AB Designing optimal formulations for automotive waterborne basecoats can be fairly complex, often requiring knowledge of events that occur at the mol. level. The ultimate performance of the coating can depend upon the success with which this knowledge is applied. We examine a system in which an aq. dispersion of an acrylic latex with -OH functionality reacts with a melamine deriv. when heated. We use fluorescence-labeling and energy transfer measurements to obtain information on the relative rates of **crosslinking** and interparticle polymer diffusion in these films. We show that temp. and particle morphol. play an important role in the development of film properties. Finally, these energy transfer expts. provide information on the location of the melamine-formaldehyde resin in the dry film before the onset of **crosslinking**. This system can serve as a model for waterborne basecoat development in many automotive applications.
- IT 236390-13-9, 9-Anthryl methacrylate-butyl methacrylate-2-hydroxyethyl methacrylate-methacrylic acid copolymer
236390-15-1, 9-Anthryl methacrylate-butyl methacrylate-formaldehyde-2-hydroxyethyl methacrylate-melamine-methacrylic acid-9-vinylphenanthrene copolymer
(**crosslinking** vs. interdiffusion rates in melamine-formaldehyde-cured methacrylic waterborne automotive basecoats)
- RN 236390-13-9 HCA
- CN 2-Propenoic acid, 2-methyl-, polymer with 9-anthracenyl
2-methyl-2-propenoate, butyl 2-methyl-2-propenoate and
2-hydroxyethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 32468-70-5

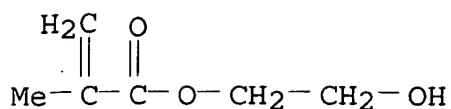
CMF C18 H14 O2



CM 2

CRN 868-77-9

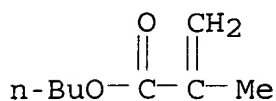
CMF C6 H10 O3



CM 3

CRN 97-88-1

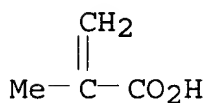
CMF C8 H14 O2



CM 4

CRN 79-41-4

CMF C4 H6 O2



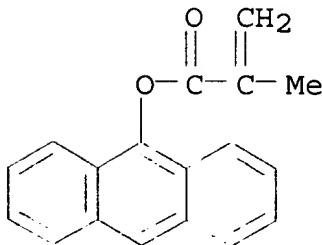
RN 236390-15-1 HCA

CN 2-Propenoic acid, 2-methyl-, polymer with 9-anthracenyl
 2-methyl-2-propenoate, butyl 2-methyl-2-propenoate,
 9-ethenylphenanthrene, formaldehyde, 2-hydroxyethyl
 2-methyl-2-propenoate and 1,3,5-triazine-2,4,6-triamine (9CI) (CA
 INDEX NAME)

CM 1

CRN 32468-70-5

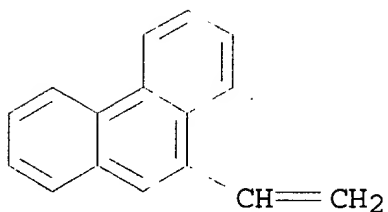
CMF C18 H14 O2



CM 2

CRN 14134-06-6

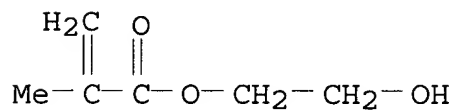
CMF C16 H12



CM 3

CRN 868-77-9

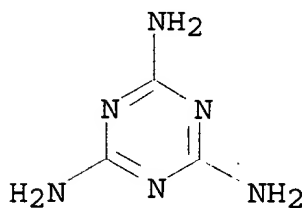
CMF C6 H10 O3



CM 4

CRN 108-78-1

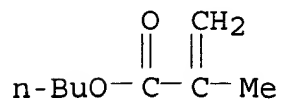
CMF C3 H6 N6



CM 5

CRN 97-88-1

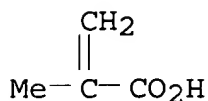
CMF C8 H14 O2



CM 6

CRN 79-41-4

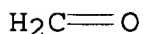
CMF C4 H6 O2



CM 7

CRN 50-00-0

CMF C H2 O



- CC 42-10 (Coatings, Inks, and Related Products)
- ST melamine formaldehyde **crosslinking** interdiffusion
methacrylic latex coating; automotive basecoat methacrylic latex
crosslinking diffusion melamine formaldehyde
- IT **Coating materials**
(automotive basecoats; **crosslinking** vs. interdiffusion
rates in melamine-formaldehyde-cured methacrylic waterborne
automotive basecoats)
- IT **Crosslinking**
Fluorescence
Particle shape
Swelling, physical
(**crosslinking** vs. interdiffusion rates in
melamine-formaldehyde-cured methacrylic waterborne automotive
basecoats)
- IT Aminoplasts
(**crosslinking** vs. interdiffusion rates in
melamine-formaldehyde-cured methacrylic waterborne automotive
basecoats)
- IT Diffusion
(interdiffusion; **crosslinking** vs. interdiffusion rates
in melamine-formaldehyde-cured methacrylic waterborne automotive
basecoats)
- IT 9003-08-1 42120-80-9, Butyl methacrylate-2-hydroxyethyl
methacrylate-methacrylic acid copolymer 236390-13-9,
9-Anthryl methacrylate-butyl methacrylate-2-hydroxyethyl
methacrylate-methacrylic acid copolymer 236390-14-0, Butyl
methacrylate-2-hydroxyethyl methacrylate-methacrylic
acid-9-vinylphenanthrene copolymer 236390-15-1, 9-Anthryl
methacrylate-butyl methacrylate-formaldehyde-2-hydroxyethyl
methacrylate-melamine-methacrylic acid-9-vinylphenanthrene copolymer
236390-16-2, Butyl methacrylate-formaldehyde-2-hydroxyethyl

methacrylate-melamine-methacrylic acid copolymer
(**crosslinking** vs. interdiffusion rates in
melamine-formaldehyde-cured methacrylic waterborne automotive
basecoats)

L18 ANSWER 7 OF 13 HCA COPYRIGHT 2002 ACS

130:359300 **Antireflective** coating composition containing
photoacid generator, **substrate** having its **coating**
layer, and manufacture of photoresist relief image using it.
Pavelchek, Edward K.; Docanto, Manuel (Shipley L. L. C. Company,
USA). Jpn. Kokai Tokkyo Koho JP 11133618 A2 19990521 Heisei, 55 pp.
(Japanese). CODEN: JKXXAF. APPLICATION: JP 1998-61845 19980206.
PRIORITY: US 1997-797741 19970207.

AB The compn. for use with overcoated photoresists comprises (A) a
resin binder, (B) an acid or thermal acid generator, and (C) a
photoacid generator. The **substrate** is successively
coated with the above compn. layer and a photoresist layer.
The photoresist relief image is manufd. by (1) successively applying
the above compn. and a photoresist compn. on a substrate, (2)
exposing the photoresist layer to activating radiation to generate
acids from the photoacid generator, and (3) developing the exposed
photoresist layer. The coating compn., particularly useful for deep
UV applications in patterning semiconductor wafers, reduces
undesired footing of overcoated resist relief images.

IT **161065-83-4P**
(**antireflective** coating compn. contg. photoacid
generator used with overcoated photoresists for high-resoln.
resist reliefs without footing)

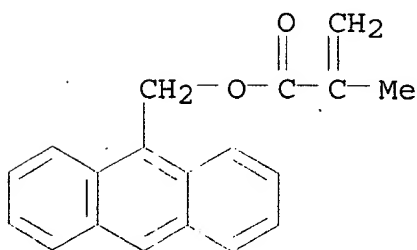
RN 161065-83-4 HCA

CN 2-Propenoic acid, 2-methyl-, 9-anthracenylmethyl ester, polymer with
2-hydroxyethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 31645-35-9

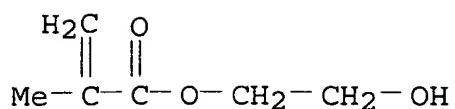
CMF C19 H16 O2



CM 2

CRN 868-77-9

CMF C6 H10 O3



- IC ICM G03F007-11
ICS C09D005-00; G03F007-004
- CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 42, 76
- ST **antireflective** coating photoacid generator photoresist overcoating; relief photoresist **antireflective** coating lamination; semiconductor wafer patterning resist **antireflective** coating
- IT **Antireflective** films
Photoresists
(**antireflective** coating compn. contg. photoacid generator used with overcoated photoresists for high-resoln. resist reliefs without footing)
- IT Photochemical catalysts
(photoacid generator; **antireflective** coating compn. contg. photoacid generator used with overcoated photoresists for high-resoln. resist reliefs without footing)
- IT Novolaks
(reaction products with anthracene methacrylic acid; **antireflective** coating compn. contg. photoacid generator used with overcoated photoresists for high-resoln. resist reliefs without footing)
- IT 193345-23-2P
(**antireflective** coating compn. contg. photoacid generator used with overcoated photoresists for high-resoln. resist reliefs without footing)
- IT 161065-83-4P
(**antireflective** coating compn. contg. photoacid generator used with overcoated photoresists for high-resoln. resist reliefs without footing)
- IT 17464-88-9, Powderlink 1174
(**crosslinking** agent; **antireflective** coating compn. contg. photoacid generator used with overcoated photoresists for high-resoln. resist reliefs without footing)
- IT 181186-90-3, UVIIHS
(photoresist; **antireflective** coating compn. contg. photoacid generator used with overcoated photoresists for high-resoln. resist reliefs without footing)
- IT 7758-05-6, Potassium iodate
(reaction with butylbenzene and camphorsulfonic acid; **antireflective** coating compn. contg. photoacid generator used with overcoated photoresists for high-resoln. resist reliefs without footing)
- IT 3144-16-9, (+-)-10-Camphorsulfonic acid

(reaction with potassium iodate and butylbenzene;
antireflective coating compn. contg. photoacid generator
 used with overcoated photoresists for high-resoln. resist reliefs
 without footing)

IT 98-06-6, tert-Butylbenzene

(reaction with potassium iodate and camphorsulfonic acid;
antireflective coating compn. contg. photoacid generator
 used with overcoated photoresists for high-resoln. resist reliefs
 without footing)

L18 ANSWER 8 OF 13 HCA COPYRIGHT 2002 ACS

130:259544 Thermosetting **antireflective** coating for deep-UV
 photoresist. Meador, Jim D.; Guerrero, Douglas J.; Shao, Xie;
 Krishnamurthy, Vandana (Brewer Science, Inc., USA). PCT Int. Appl.
 WO 9917161 A1 19990408, 47 pp. DESIGNATED STATES: W: CA, CN, JP,
 KR, SG; RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU,
 MC, NL, PT, SE. (English). CODEN: PIXXD2. APPLICATION: WO
 1998-US20672 19980928. PRIORITY: US 1997-940169 19970930.

AB A thermosetting **antireflective** coating for use with a
 deep-UV photoresist is prepd. from a compn. comprising (a) the
 reaction product of an acrylic polymer and a deep-UV-absorbing
 carboxylic acid or phenolic dye, (b) an alkylated aminoplast
crosslinking agent such as melamine, urea, benzylguanamine,
 or glycoluril, (c) a protonic acid catalyst for curing, and (d) an
 alc.-contg. solvent system.

IT 221620-74-2P 221620-80-0P 221620-87-7P

(prepn. and use in prepg. thermosetting compns. for forming
 underlaid **antireflective** coatings for UV photoresists)

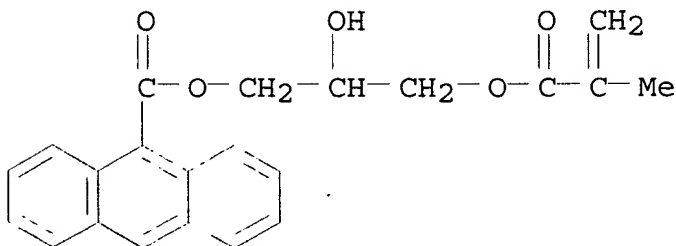
RN 221620-74-2 HCA

CN 9-Anthracenecarboxylic acid, 2-hydroxy-3-[(2-methyl-1-oxo-2-
 propenyl)oxylpropyl ester, polymer with 2-hydroxypropyl
 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 85419-45-0

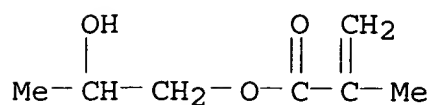
CMF C22 H20 O5



CM 2

CRN 923-26-2

CMF C7 H12 O3



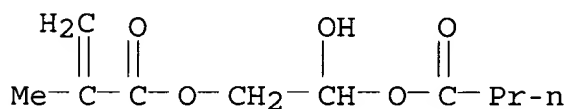
RN 221620-80-0 HCA

CN 9-Anthracenecarboxylic acid, 2-hydroxy-3-[(2-methyl-1-oxo-2-propenyl)oxy]propyl ester, polymer with 1-hydroxy-2-[(2-methyl-1-oxo-2-propenyl)oxy]ethyl butanoate and 2-hydroxypropyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 221620-79-7

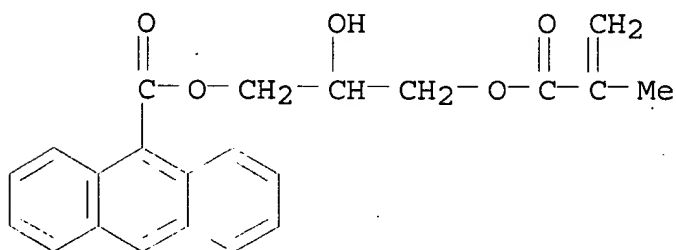
CMF C10 H16 O5



CM 2

CRN 85419-45-0

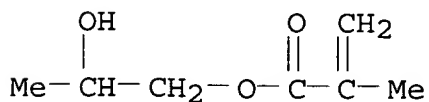
CMF C22 H20 O5



CM 3

CRN 923-26-2

CMF C7 H12 O3



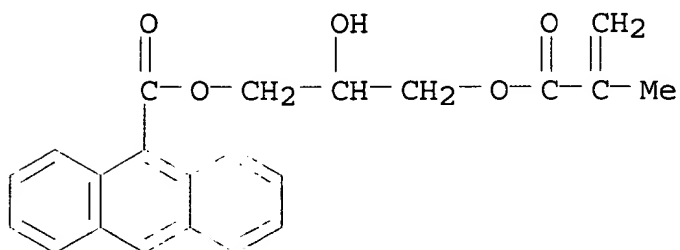
RN 221620-87-7 HCA

CN 9-Anthracenecarboxylic acid, 2-hydroxy-3-[(2-methyl-1-oxo-2-propenyl)oxy]propyl ester, polymer with 2-chloroethyl 2-methyl-2-propenoate and oxiranylmethyl 2-methyl-2-propenoate (9CI)
(CA INDEX NAME)

CM 1

CRN 85419-45-0

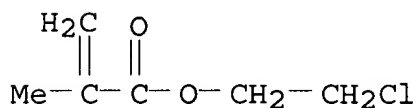
CMF C22 H20 O5



CM 2

CRN 1888-94-4

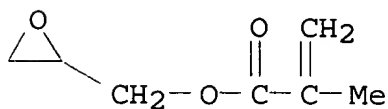
CMF C6 H9 Cl O2



CM 3

CRN 106-91-2

CMF C7 H10 O3



IC ICM G03C001-492
ICS G03C001-815
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
ST thermosetting polymer **antireflective** underlaid coating photoresist
IT Photoresists
(deep-UV; thermosetting compns. contg. dye-attached acrylic

- polymers for prepg. underlaid **antireflective** coatings for)
- IT **Antireflective** films
(polymeric, underlaid; contg. dye-attached acrylic polymers for deep-UV photoresists)
- IT Aminoplasts
(thermosetting compns. for forming underlaid **antireflective** coatings for UV photoresist patterning contg. dye-attached acrylic polymers and)
- IT 56-37-1, Benzyltriethylammonium chloride
(catalyst in prepg. dye-attached acrylic polymers for forming underlaid **antireflective** coatings for UV photoresists)
- IT 221620-71-9P 221620-74-2P 221620-80-0P
221620-84-4P 221620-87-7P
(prepn. and use in prepg. thermosetting compns. for forming underlaid **antireflective** coatings for UV photoresists)
- IT 104-15-4, uses 693-98-1 9003-08-1, Cymel 303LF 17464-88-9, Powderlink 1174
(thermosetting compns. for forming underlaid **antireflective** coatings for UV photoresist patterning contg. dye-attached acrylic polymers and)
- L18 ANSWER 9 OF 13 HCA COPYRIGHT 2002 ACS
130:45293 Composition for **antireflection** or light absorption film and compounds for use in same. Padmanaban, Munirathna; Kang, Wen-bing; Tanaka, Hatsuyuki; Kimura, Ken; Pawlowski, Georg (Clariant International Ltd., Switz.). PCT Int. Appl. WO 9854619 A1 19981203, 65 pp. DESIGNATED STATES: W: CN, JP, KR, SG, US; RW: DE, FR, GB, IT. (Japanese). CODEN: PIXXD2. APPLICATION: WO 1998-JP2234 19980521. PRIORITY: JP 1997-137088 19970527.
- AB A compn. capable of forming an **antireflection** or light absorption film which satisfactorily absorbs radiations having wavelengths of 100 to 450 nm, is free from the diffusion of a photo-generated acid into the film or the intermixing of a resist with the film, and is excellent in storage stability and step coverage properties; and novel compds. and novel polymers useful for the compn. The compn. contains a compd. which is a (meth)acrylic monomer or polymer having at least one isocyanate or thioisocyanate group bonded to a side chain thereof through an alkylene group, etc., or contains the compd. or polymer which has an aminated or hydroxylated org. chromophore which absorbs light in the wavelength region of 100 to 450 nm and is bonded to the isocyanate or thioisocyanate group. The compn. is applied to a substrate and baked to form a film serving as, e.g., an **antireflection** film. A chem.-amplification-type resist is applied to this film, and the resist film is exposed to light and then developed to form a resist image with high resoln. Due to the presence of the isocyanate or thioisocyanate group in the compd., the film serving as, e.g., an **antireflection** film is cured through **crosslinking** during baking. Due to the presence of the org. chromophore, the film absorbs exposure light in the wavelength region of 100 to 450 nm.

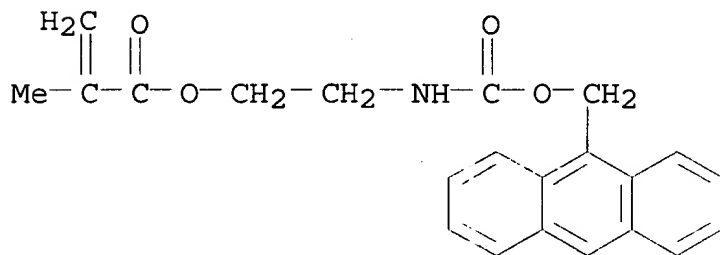
IT 216989-12-7P, N-(2-Methacryloyloxyethyl)-9-methylanthracene carbamate-2-methacryloyloxyethyl acetate copolymer 216989-13-8P, 9-Anthracene methacrylate-2-(methacryloyloxy)ethylisocyanate copolymer 216989-14-9P, N-(2-Methacryloyloxyethyl)-9-methylanthracene carbamate-methyl methacrylate-methacryloyloxyethyl isocyanate copolymer
(compn. for **antireflection** or light absorption film)

RN 216989-12-7 HCA

CN 2-Propenoic acid, 2-methyl-, 2-(acetyloxy)ethyl ester, polymer with 2-[[[9-anthracenylmethoxy)carbonyl]amino]ethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

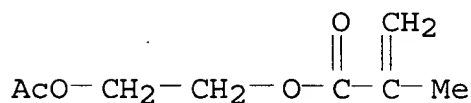
CM 1

CRN 167859-78-1
CMF C22 H21 N O4



CM 2

CRN 20166-49-8
CMF C8 H12 O4

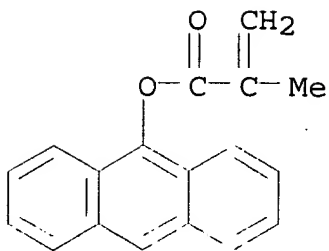


RN 216989-13-8 HCA

CN 2-Propenoic acid, 2-methyl-, 9-anthracenyl ester, polymer with 2-isocyanatoethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

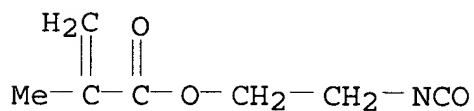
CRN 32468-70-5
CMF C18 H14 O2



CM 2

CRN 30674-80-7

CMF C7 H9 N O3



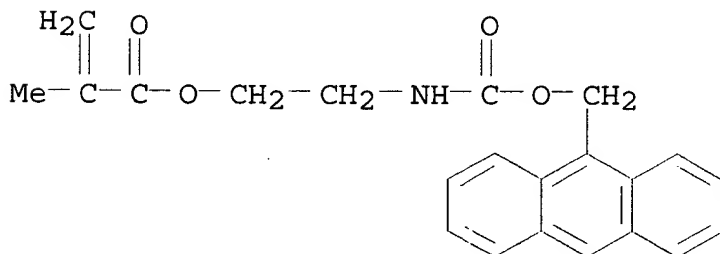
RN 216989-14-9 HCA

CN 2-Propenoic acid, 2-methyl-, 2-[[[(9-anthracenylmethoxy)carbonyl]amino]ethyl ester, polymer with 2-isocyanatoethyl 2-methyl-2-propenoate and methyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 167859-78-1

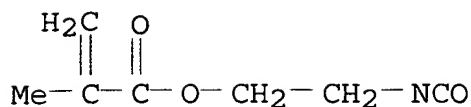
CMF C22 H21 N O4



CM 2

CRN 30674-80-7

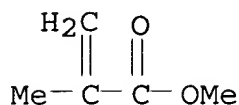
CMF C7 H9 N O3



CM 3

CRN 80-62-6

CMF C5 H8 O2



- IC ICM G03F007-11
ICS C08F020-34; C08F020-38; C08F020-10; C08F022-04; C08F022-40;
H01L021-027
- CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and
Other Reprographic Processes)
Section cross-reference(s): 76
- ST **antireflection** light absorption film compn
- IT **Antireflective** films
Photolithography
Photoresists
Semiconductor materials
(compn. for **antireflection** or light absorption film and
compds. for use in same)
- IT 88007-27-6DP, reaction product with 1-aminoanthracene
100042-81-7DP, 2-Methacryloyloxyethylisocyanate-methylmethacrylate
copolymer, reaction product with 1-aminoanthracene 216989-11-6P,
2-(Methacryloyloxy)ethyl isocyanate-maleic acid copolymer
(compn. for **antireflection** or light absorption film)
- IT **216989-12-7P**, N-(2-Methacryloyloxyethyl)-9-methylanthracene
carbamate-2-methacryloxyethyl acetate copolymer **216989-13-8P**
, 9-Anthracene methacrylate-2-(methacryloyloxy)ethylisocyanate
copolymer **216989-14-9P**, N-(2-Methacryloyloxyethyl)-9-
methylanthracene carbamate-methyl methacrylate-methacryloxyethyl
isocyanate copolymer
(compn. for **antireflection** or light absorption film)
- IT 62-53-3D, Aniline, reaction product with poly(2-
methacryloyloxyethylisocyanate) 63-74-1D, 4-
Aminobenzenesulfonamide, reaction product with poly(2-
methacryloyloxyethylisocyanate) 90-15-3D, 1-Hydroxynaphthalene,
reaction product with poly(2-methacryloyloxyethylisocyanate)
95-03-4D, 2-Amino-4-chloroanisole, reaction product with
poly(2-methacryloyloxyethylisocyanate) 108-95-2D, Phenol, reaction
product with poly(2-methacryloyloxyethylisocyanate) 134-32-7D,
1-Aminonaphthalene, reaction product with poly(2-

methacryloyloxyethylisocyanate) 610-49-1D, 1-Aminoanthracene, reaction product with poly(2-methacryloyloxyethylisocyanate) 708-06-5D, 2-Hydroxynaphthaldehyde, reaction product with poly(2-methacryloyloxyethylisocyanate) 782-45-6D, 4-Aminobenzanilide, reaction product with poly(2-methacryloyloxyethylisocyanate) 1468-95-7D, 9-Hydroxymethylanthracene, reaction product with poly(2-methacryloyloxyethylisocyanate) 1576-43-8D, 4-Hydroxybenzenesulfonamide, reaction product with poly(2-methacryloyloxyethylisocyanate) 1689-82-3D, 4-Hydroxyazobenzene, reaction product with poly(2-methacryloyloxyethylisocyanate) 3743-23-5D, 2-Hydroxy-4-chloroanisole, reaction product with poly(2-methacryloyloxyethylisocyanate) 6373-73-5D, reaction product with poly(2-methacryloyloxyethylisocyanate) 14121-97-2D, 4-Hydroxybenzanilide, reaction product with poly(2-methacryloyloxyethylisocyanate) (compn. for **antireflection** or light absorption film)

L18 ANSWER 10 OF 13 HCA COPYRIGHT 2002 ACS

128:223859 Composition for bottom anti-**reflective** coating film and resist pattern formation using same. Mizutani, Ichiro; Yoshimoto, Hiroshi (Fuji Photo Film Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 10048834 A2 19980220 Heisei, 16 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1996-208631 19960807.

AB The title compn. contains a polymer light-absorbing agent having a repeating unit $\text{CH}_2\text{CR}_1(\text{XCOCH:CHQYn})$ [$\text{R}_1 = \text{H, Me, Cl, Br, CN}$; $\text{X} =$ single bond or divalent org. linking group; $\text{Q} = \text{C}_6\text{-14 arom. ring with } (n + 1) \text{ valences}$; $\text{Y} = \text{electron-donating group}$; $n = 0\text{-}3$] and a melamine, guanamine or urea compd. substituted with .gtoreq.2 groups of methylol and/or alkoxymethyl group. A phenol, naphthol or hydroxyanthracene compd. substituted with .gtoreq.2 groups of methylol and/or alkoxymethyl group may be used instead of the above substituted compd. A method of forming a resist pattern is also claimed, in which the compn. is coating process on a substrate and baked to cure the anti-**reflective** coating process and a patterned photoresist layer is then formed thereon. The compn. provides a coating process showing reduced effect of the **reflected** light from the substrate. The compn. has higher dry etching rate than resist and is insol. in resist solvent, i.e., the component in the coating process and the component in the resist are not mixed together.

IT 204185-45-5P 204185-46-6P

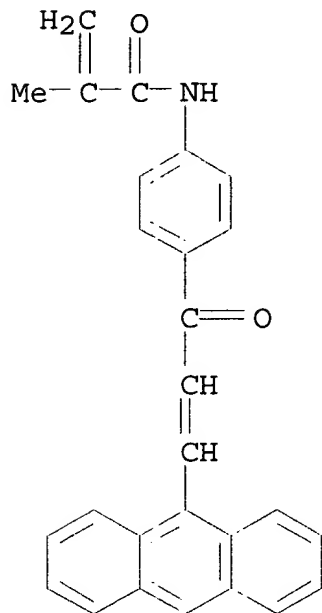
(formed as bottom **antireflective** film for resist patterning)

RN 204185-45-5 HCA

CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with N-[4-[3-(9-anthracenyl)-1-oxo-2-propenyl]phenyl]-2-methyl-2-propenamide and N,N,N',N',N'',N'''-hexakis(methoxymethyl)-1,3,5-triazine-2,4,6-triamine (9CI) (CA INDEX NAME)

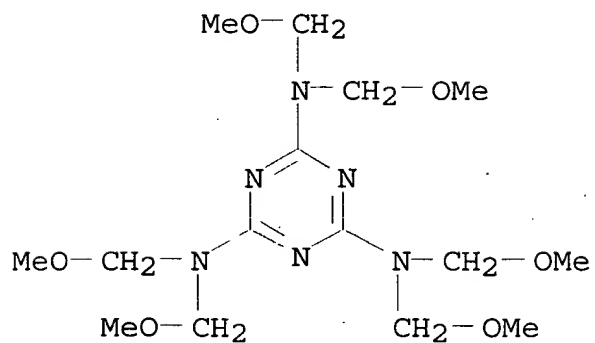
CM 1

CRN 204185-44-4
CMF C27 H21 N O2



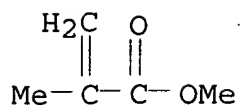
CM 2

CRN 3089-11-0
CMF C15 H30 N6 O6



CM 3

CRN 80-62-6
CMF C5 H8 O2



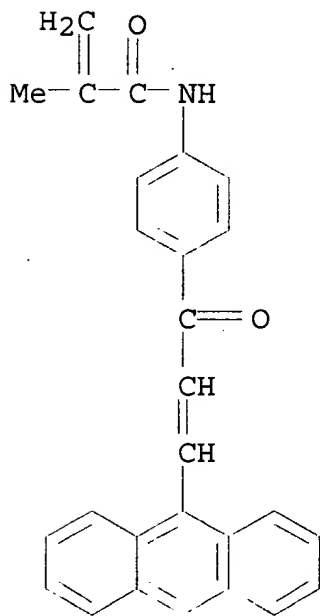
RN 204185-46-6 HCA

CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with
N-[4-[3-(9-anthracenyl)-1-oxo-2-propenyl]phenyl]-2-methyl-2-
propenamide and 5,5'-(1-methylethylidene)bis[2-hydroxy-1,3-
benzenedimethanol] (9CI) (CA INDEX NAME)

CM 1

CRN 204185-44-4

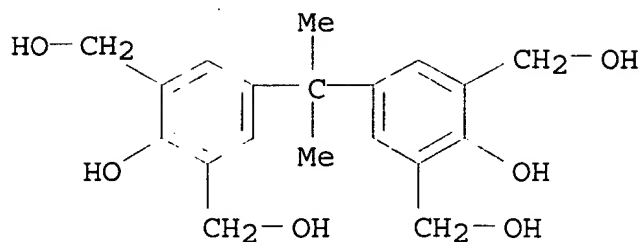
CMF C27 H21 N O2



CM 2

CRN 3957-22-0

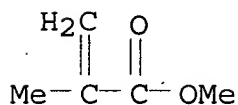
CMF C19 H24 O6



CM 3

CRN 80-62-6

CMF C5 H8 O2



IC ICM G03F007-11
ICS C09D005-00; C09D129-10; C09D133-06; C09D133-24; G03F007-004;
H01L021-027; C08F216-14; C08F220-40; C08F220-54; C08F299-00

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and
Other Reprographic Processes)
Section cross-reference(s): 42

ST resist patterning bottom **antireflective** coating

IT **Antireflective** films
Photoresists
(bottom **antireflective** coating material for resist
patterning)

IT 110726-28-8DP, hexamethoxymethylated, polymers with methacrylic
monomers
(TrisP-PA; formed as bottom **antireflective** film for
resist patterning)

IT 204185-41-1P
(**crosslinking** agent; prepd. as **crosslinking**
agent for bottom **antireflective** coating for resist
patterning)

IT 204185-60-4P
(formed as bottom **antireflective** film for resist
patterning)

IT 204185-37-5P 204185-39-7P 204185-40-0P 204185-42-2P
204185-43-3P 204185-45-5P 204185-46-6P
(formed as bottom **antireflective** film for resist
patterning)

IT 3654-49-7P
(intermediate; prepd. as **crosslinking** agent for bottom
antireflective coating for resist patterning)

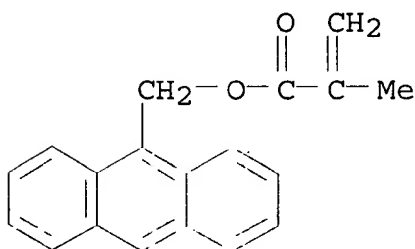
IT 16522-39-7P

- (intermediate; prepd. as polymerizable light-absorbing agent for bottom **antireflective** coating for resist patterning)
- IT 50-00-0, Formaldehyde, reactions
(prepd. as **crosslinking** agent for bottom **antireflective** coating for resist patterning)
- IT 99-92-3 121-33-5, 3-Methoxy-4-hydroxybenzaldehyde 123-08-0, 4-Hydroxybenzaldehyde 920-46-7, Methacryloyl chloride
(prepd. as polymerizable light-absorbing agent for bottom **antireflective** coating for resist patterning)
- L18 ANSWER 11 OF 13 HCA COPYRIGHT 2002 ACS
- 128:95349 **Antireflective** coating for photoresist. Sinta, Roger F.; Adams, Timothy G.; Mori, James Michael (Shipley Company, L.L.C., USA). Eur. Pat. Appl. EP 813114 A2 19971217, 16 pp. DESIGNATED STATES: R: DE, FR, GB, IT. (English). CODEN: EPXXDW. APPLICATION: EP 1997-108605 19970528. PRIORITY: US 1996-665019 19960611.
- AB The invention provides a new light-absorbing **crosslinking** compn. suitable for forming an **antireflective** coating (ARC), particularly for a deep-UV photoresist. The ARC comprises a **crosslinker** and novel resin binders that effectively absorb **reflected** deep-UV exposure radiation.
- IT 161065-83-4, 9-Anthrylmethyl methacrylate-2-hydroxyethyl methacrylate copolymer
(deep-UV photoresists with **antireflective** coatings contg.)
- RN 161065-83-4 HCA
- CN 2-Propenoic acid, 2-methyl-, 9-anthracenylmethyl ester, polymer with 2-hydroxyethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 31645-35-9

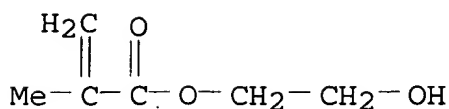
CMF C19 H16 O2



CM 2

CRN 868-77-9

CMF C6 H10 O3



- IC ICM G03F007-09
 CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
 Section cross-reference(s): 73
 ST UV photoresist **antireflective** coating **crosslinking**
 IT Novolaks
 (contg. glycidyl and anthryl groups for **antireflective** coatings for deep-UV photoresists)
 IT Photoresists
 (deep-UV; **antireflective** coatings for)
 IT **Antireflective** films
 (for deep-UV photoresists)
 IT 18630-67-6P, Chloroxine methacrylate
 (chloroxine methacrylate; prepn. and reaction in prepg. **antireflective** coatings for deep-UV photoresists)
 IT 104-15-4, uses 1678-43-9, Benzoin tosylate 17464-88-9, Powderlink 1174 20444-09-1, 2-Nitrobenzyl tosylate 161065-83-4, 9-Anthrylmethyl methacrylate-2-hydroxyethyl methacrylate copolymer
 (deep-UV photoresists with **antireflective** coatings contg.)
 IT 201030-65-1P
 (prepn. and use in forming **antireflective** coatings for deep-UV photoresists)
 IT 79-41-4, reactions 773-76-2, Chloroxine
 (reaction in prepg. **antireflective** coatings for deep-UV photoresists)
- L18 ANSWER 12 OF 13 HCA COPYRIGHT 2002 ACS
 123:58238 Light-shielding polyester particles. Maeda, Satoshi; Hotsuta, Yasunari; Yoneda, Shigeru; Kobayashi, Masanori; Yamada, Yozo (Toyo Boseki, Japan). Jpn. Kokai Tokkyo Koho JP 07082385 A2 19950328 Heisei, 11 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1993-224556 19930909.
- AB The particles consist mainly of polyesters having ionic group content 20-1000 equiv/ton and contg. .gtoreq.10 mol% monomer units having the backbone consisting of arom. polycyclic hydrocarbons and have av. particle diam. (D) 1-100 .mu.m, particle content with diam. 0.5D-2.0D .gtoreq.80%, and diam. variation .ltoreq.30%. The particles are useful for coatings on paper and films. Thus, 1000 parts aq. dispersion contg. 5% di-Me isophthalate-dimethyl 1,5-naphthalenedicarboxylate-(dimethylamino)ethyl methacrylate-ethylene glycol-fumaric acid-neopentyl glycol-sodium di-Me 5-sulfoisophthalate copolymer particles, 45 parts styrene, and 5 parts divinylbenzene were stirred and heated 300 min at 80.degree.

to give **crosslinked** particles with D 4.5 .mu.m and diam. variation 10.7%. A polyester film coated with a compn. contg. this particle exhibited UV ray shielding amt. 99%.

IT 164658-68-8P 164658-70-2P
(particles; light-shielding)

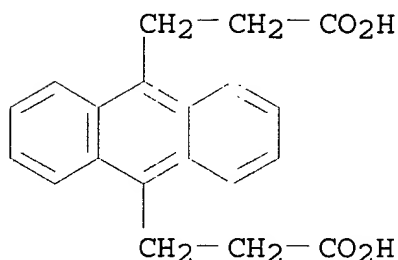
RN 164658-68-8 HCA

CN 9,10-Anthracenedipropenoic acid, polymer with 1,3-benzenedicarboxylic acid, 1,4-benzenedicarboxylic acid, 2-(dimethylamino)ethyl 2-methyl-2-propenoate, 2,2-dimethyl-1,3-propanediol and 1,2-ethanediol (9CI) (CA INDEX NAME)

CM 1

CRN 71367-28-7

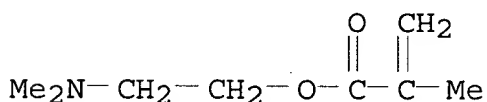
CMF C20 H18 O4



CM 2

CRN 2867-47-2

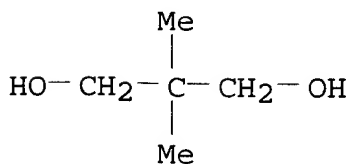
CMF C8 H15 N O2



CM 3

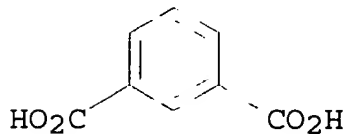
CRN 126-30-7

CMF C5 H12 O2



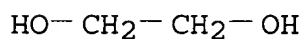
CM 4

CRN 121-91-5
CMF C8 H6 O4



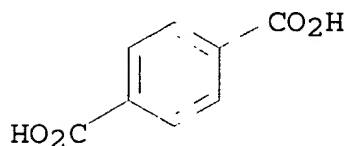
CM 5

CRN 107-21-1
CMF C2 H6 O2



CM 6

CRN 100-21-0
CMF C8 H6 O4



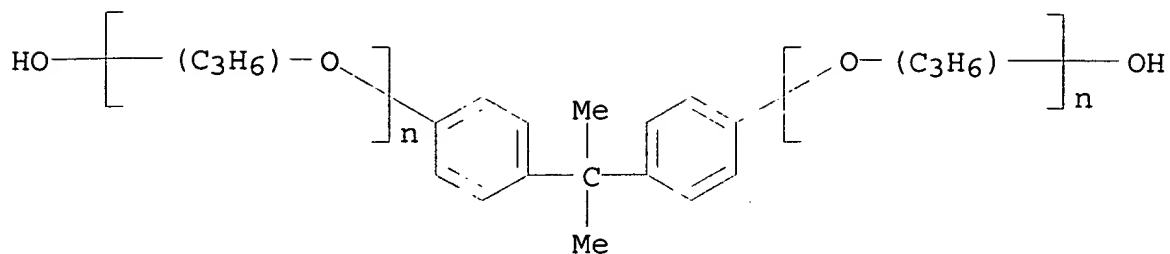
RN 164658-70-2 HCA
CN 1,3-Benzenedicarboxylic acid, 5-sulfo-, monosodium salt, polymer with 1,3-dihydro-1,3-dioxo-5-isobenzofurancarboxylic acid, 2-(dimethylamino)ethyl 2-methyl-2-propenoate, dimethyl 1,3-benzenedicarboxylate, dimethyl-1,4-benzenedicarboxylate, 1,2-ethanediol, methyl 9-anthracenecarboxylate and .alpha.,.alpha.'-[(1-methylethylidene)di-4,1-phenylene]bis[.omega.-hydroxypoly[oxy(methyl-1,2-ethanediyl)]]], ammonium salt (9CI) (CA INDEX NAME)

CM 1

CRN 164658-69-9
CMF (C16 H12 O2 . C10 H10 O4 . C10 H10 O4 . C9 H4 O5 . C8 H15 N O2 . C8 H6 O7 S . (C3 H6 O)n (C3 H6 O)n C15 H16 O2 . C2 H6 O2 . Na)x
CCI PMS

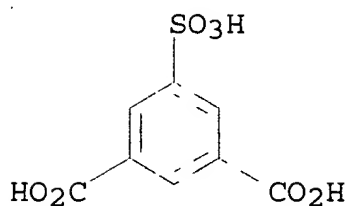
CM 2

CRN 37353-75-6
 CMF (C3 H6 O)n (C3 H6 O)n C15 H16 O2
 CCI IDS, PMS
 CDES 8:ID



CM 3

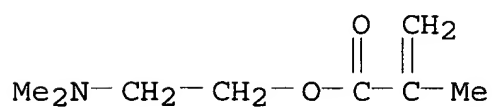
CRN 6362-79-4
 CMF C8 H6 O7 S . Na



• Na

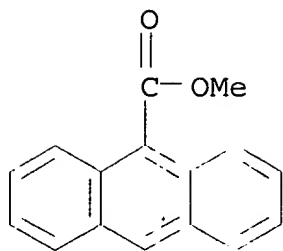
CM 4

CRN 2867-47-2
 CMF C8 H15 N O2



CM 5

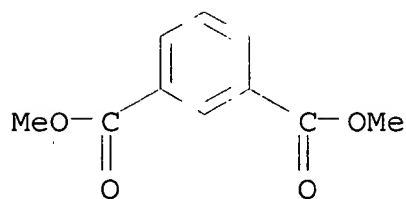
CRN 1504-39-8
 CMF C16 H12 O2



CM 6

CRN 1459-93-4

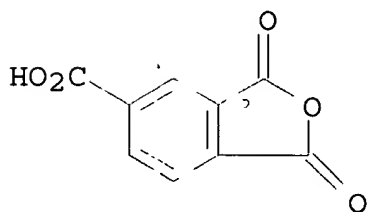
CMF C10 H10 O4



CM 7

CRN 552-30-7

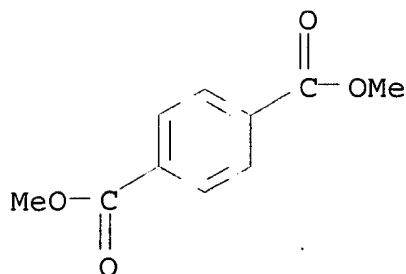
CMF C9 H4 O5



CM 8

CRN 120-61-6

CMF C10 H10 O4



CM 9

CRN 107-21-1

CMF C2 H6 O2

HO-CH₂-CH₂-OH

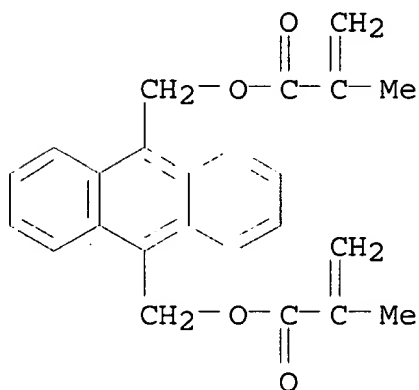
IC ICM C08J003-16
ICS C08L067-02
ICA C08L067-00
CC 38-3 (Plastics Fabrication and Uses)
Section cross-reference(s): 42
IT **Coating materials**
(light-shielding polyester particles)
IT 164658-66-6P 164658-67-7P **164658-68-8P**
164658-70-2P 164658-71-3P
(particles; light-shielding)

L18 ANSWER 13 OF 13 HCA COPYRIGHT 2002 ACS

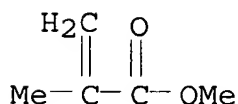
89:44472 Radiothermoluminescence of poly(methyl methacrylate) sparsely **crosslinked** by dimethacrylhydroxymethylanthracene. Rafikov, S. R.; Korobeinikova, V. N.; Lotnik, S. V.; Bikchurina, L. Kh.; Leplyanin, G. V.; Kazakov, V. P. (Inst. Khim., Ufa, USSR). Vysokomol. Soedin., Ser. A, 20(4), 766-71 (Russian) 1978. CODEN: VYSAAF. ISSN: 0507-5475.

AB Radiothermoluminescence of 9,10-bis(methacryloyloxymethyl)anthracene-Me methacrylate copolymer (I) [**66081-08-1**] of low **crosslink** d. was investigated as a function of irradiation dose and **crosslink** d. An increase in the concentration of **crosslinking** anthracene fragments in I did not produce new radiothermoluminescence maximum but it affected the intensity of the existing ones corresponding to relaxational transitions in poly(Me methacrylate). Irradiation of I with gamma rays at 77 K and subsequent heating to 300 K resulted in oxidation of the anthracene units and was **reflected** in the appearance of yellow color of the samples and their green fluorescence. Anthracene in nonoxidized I and oxidation products in oxidized I constituted the source of the emitted photons.

IT 66081-08-1
 (radiothermoluminescence of)
 RN 66081-08-1 HCA
 CN 2-Propenoic acid, 2-methyl-, 9,10-anthracenediylbis(methylene)
 ester, polymer with methyl 2-methyl-2-propenoate (9CI) (CA INDEX
 NAME)
 CM 1
 CRN 53223-89-5
 CMF C24 H22 O4



CM 2
 CRN 80-62-6
 CMF C5 H8 O2



CC 36-5 (Plastics Manufacture and Processing)
 IT **Crosslinking**
 (of bis(methacryloyloxymethyl)anthracene-Me methacrylate
 copolymers, radiothermoluminescence in relation to)
 IT Luminescence, thermo-
 (of preirradiated bis(methacryloyloxymethyl)anthracene-Me
 methacrylate copolymers, **crosslink** d. effect on)
 IT 66081-08-1
 (radiothermoluminescence of)

=> d 119 1-22 ti

- TI In Situ Monitoring of Photo-Cross-Linking
Reaction of Anthracene Chromophores in Polymer Langmuir-Blodgett
Films by an Integrated Optical Waveguide Technique
- L19 ANSWER 2 OF 22 HCA COPYRIGHT 2002 ACS
TI Interfacial Nonradiative Energy Transfer in Responsive Core-Shell
Hydrogel Nanoparticles
- L19 ANSWER 3 OF 22 HCA COPYRIGHT 2002 ACS
TI Surface-attached polymer networks
- L19 ANSWER 4 OF 22 HCA COPYRIGHT 2002 ACS
TI Nanometric Inhomogeneity of Polymer Network Investigated by Scanning
Near-Field Optical Microscopy
- L19 ANSWER 5 OF 22 HCA COPYRIGHT 2002 ACS
TI Photoalignment of liquid crystals on photocrosslinkable polymer
films with anthracene at the end of the side group
- L19 ANSWER 6 OF 22 HCA COPYRIGHT 2002 ACS
TI Molecular recognition by fluorescent imprinted polymers
- L19 ANSWER 7 OF 22 HCA COPYRIGHT 2002 ACS
TI Pressure-sensitive adhesives with freedom from leachable materials
- L19 ANSWER 8 OF 22 HCA COPYRIGHT 2002 ACS
TI Internal Structure of Core-Shell Latex Particles Studied by
Fluorescence Nonradiative Energy Transfer
- L19 ANSWER 9 OF 22 HCA COPYRIGHT 2002 ACS
TI Gelation Processes of Polymer Solutions. 1. Photodimerization of
Free and Polymer-Bound Anthryl Groups
- L19 ANSWER 10 OF 22 HCA COPYRIGHT 2002 ACS
TI Photodecomposition of copolymers between 9-anthrylmethyl
methacrylate and methyl methacrylate by XeF excimer laser
irradiation
- L19 ANSWER 11 OF 22 HCA COPYRIGHT 2002 ACS
TI Manufacture of ion-exchange acrylic polymer membranes
- L19 ANSWER 12 OF 22 HCA COPYRIGHT 2002 ACS
TI Arylpropenoates as photoactive units in photocontrollable polymers
- L19 ANSWER 13 OF 22 HCA COPYRIGHT 2002 ACS
TI Photobleaching chemistry of polymers containing anthracenes
- L19 ANSWER 14 OF 22 HCA COPYRIGHT 2002 ACS
TI The solid state photobleaching and photocrosslinking of copolymers
containing the anthracene chromophore
- L19 ANSWER 15 OF 22 HCA COPYRIGHT 2002 ACS

TI Photocrosslinking of anthracene-containing copolymers

L19 ANSWER 16 OF 22 HCA COPYRIGHT 2002 ACS

TI Formation of **crosslinked** polymers in the copolymerization of 9,10-anthrylenedimethyl dimethacrylate and methyl methacrylate

L19 ANSWER 17 OF 22 HCA COPYRIGHT 2002 ACS

TI Effect of thermodynamic strength of solvent on structure formation of **crosslinked** copolymers

L19 ANSWER 18 OF 22 HCA COPYRIGHT 2002 ACS

TI Intrachain photodimerization of anthracene groups in solutions of 9-anthrylmethyl methacrylate-methyl methacrylate copolymers

L19 ANSWER 19 OF 22 HCA COPYRIGHT 2002 ACS

TI Composite electrophotographic plate

L19 ANSWER 20 OF 22 HCA COPYRIGHT 2002 ACS

TI Positive-working photoresists

L19 ANSWER 21 OF 22 HCA COPYRIGHT 2002 ACS

TI Investigation of the copolymerization of mono- and bifunctional monomers of methacrylic esters

L19 ANSWER 22 OF 22 HCA COPYRIGHT 2002 ACS

TI Splitting of anthrylmethyl carboxylate bonds in polymer systems

=> d l19 3,14,20 cbib abs hitstr hitind

L19 ANSWER 3 OF 22 HCA COPYRIGHT 2002 ACS

134:353828 Surface-attached polymer networks. Prucker, Oswald; Muller, Kristin; Ruhe, Jurgen (Institute for Microsystem Technology (IMTEK), University of Freiburg, Freiburg, D-79085, Germany). Mater. Res. Soc. Symp. Proc., 629(Interfaces, Adhesion and Processing in Polymer Systems), FF9.8.1-FF9.8.6 (English) 2001. CODEN: MRSPDH. ISSN: 0272-9172. Publisher: Materials Research Society.

AB In this paper we present three novel routes for the prepn. of surface-attached polymer networks. In one system the network is formed in situ at the surface by thermal polymn. in soln. and from the surface. Another synthetic route starts with a surface that carries photoreactive groups. Onto this surface a polymer is deposited that also carries photoreactive groups and both the **crosslinks** of the network and the covalent bond to the surface are formed by UV illumination. The third approach starts with the in situ formation of surface-attached copolymers that again carry photoreactive groups that are subsequently linked together by UV light. We present evidence for the successful synthesis of these networks and their superior adhesion on glass surfaces.

IT 33773-67-0P, 9-Anthracenylmethyl methacrylate-methyl methacrylate copolymer

(surface-attached, **crosslinked**; prepn. of
surface-attached polymer networks)

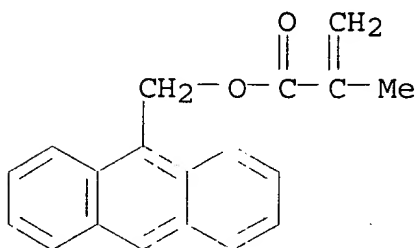
RN 33773-67-0 HCA

CN 2-Propenoic acid, 2-methyl-, 9-anthracenylmethyl ester, polymer with
methyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 31645-35-9

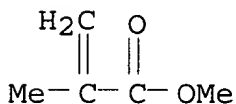
CMF C19 H16 O2



CM 2

CRN 80-62-6

CMF C5 H8 O2



CC 37-3 (Plastics Manufacture and Processing)

Section cross-reference(s): 35

ST surface attached polymer network prepn UV photo **crosslinking**

IT **Crosslinking**

(photochem.; in prepn. of surface-attached polymer networks)

IT 33773-67-0P, 9-Anthracenylmethyl methacrylate-methyl
methacrylate copolymer

(surface-attached, **crosslinked**; prepn. of
surface-attached polymer networks)

L19 ANSWER 14 OF 22 HCA COPYRIGHT 2002 ACS

110:213540 The solid state photobleaching and photocrosslinking of
copolymers containing the anthracene chromophore. Hargreaves, John
S. (Hewlett Packard Lab., Palo Alto, CA, 94304-1126, USA). J.
Polym. Sci., Part A: Polym. Chem., 27(1), 203-16 (English) 1989.
CODEN: JPACEC. ISSN: 0887-624X.

AB Copolymers of Me methacrylate with an anthracene deriv. are
photodegraded in the solid state to give **crosslinked**
material. The mechanism of insolubilization is dependent on the
nature of the substituents at both the 9 and 10 positions of the

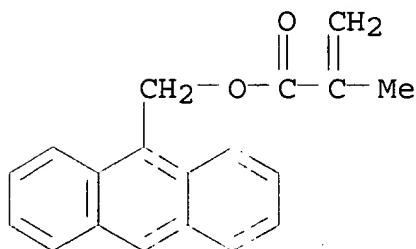
anthracene chromophore. Photodimerization is the primary and most efficient cause of insolubilization if one of these positions is unsubstituted. Photodimerization does not occur if both these positions are substituted; instead **crosslinking** is caused by photolysis of the endoperoxide of the parent anthracene. Bromination can sensitize the initial photooxidn. and subsequent **crosslinking** in a copolymer where photodimerization does not occur. As a consequence of the **crosslinking** the rate of photobleaching of the anthracene chromophore is severely curtailed.

IT 33773-67-0P 104677-81-8P 120685-53-2P
 (prepn. and photobleaching and photocrosslinking of)
 RN 33773-67-0 HCA
 CN 2-Propenoic acid, 2-methyl-, 9-anthracenylmethyl ester, polymer with methyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 31645-35-9

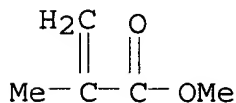
CMF C19 H16 O2



CM 2

CRN 80-62-6

CMF C5 H8 O2

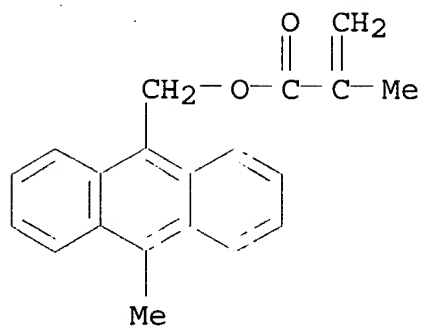


RN 104677-81-8 HCA
 CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with (10-methyl-9-anthracenyl)methyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 57504-09-3

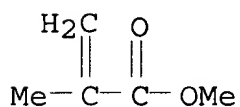
CMF C20 H18 O2



CM 2

CRN 80-62-6

CMF C5 H8 O2



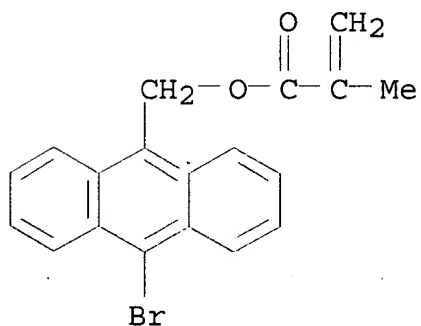
RN 120685-53-2 HCA

CN 2-Propenoic acid, 2-methyl-, (10-bromo-9-anthracenyl)methyl ester, polymer with methyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 120642-88-8

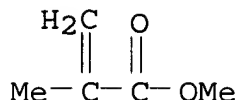
CMF C19 H15 Br O2



CM 2

CRN 80-62-6

CMF C5 H8 O2



CC 35-8 (Chemistry of Synthetic High Polymers)

IT **Crosslinking**

Dimerization

Kinetics of oxidation

Polymer degradation

(photochem., of anthracene group-contg. polymethacrylates)

IT 33773-67-0P 104677-81-8P 120685-53-2P

(prepn. and photobleaching and photocrosslinking of)

L19 ANSWER 20 OF 22 HCA COPYRIGHT 2002 ACS

95:124092 Positive-working photoresists. (Agency of Industrial Sciences and Technology, Japan). Jpn. Kokai Tokkyo Koho JP 56022429 19810303 Showa, 4 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1979-98450 19790801.

AB A pos.-working photosensitive resin compn. contains a polymer having a functional group (0.1-5% with respect to monomeric unit) which forms **crosslinkage** when exposed to long-wavelength light and the resultant **crosslinkage** decomp. when irradiated with short-wavelength light. The functional groups are preferably selected from moieties of cinnamic acid, cinnamylideneacetic acid, anthracene, acenaphthene, coumarin, and chalcone. Thus, glycidyl methacrylate-Me methacrylate copolymer (1.7:33.1 wt. ratio) 2g and .alpha.-cyanocinnamylidene acetic acid 0.2 g were heated in the presence of triethylbenzylammonium chloride to give a photosensitive polymer. The polymer was dissolved in PhCl and coated on a glass support, uniformly exposed to 500 W Hg lamp (.gtoreq. 350 nm), then imagewise exposed to a 253.7 nm light; and developed with hexyl acetate to give pos. patterns on the glass plate.

IT 79079-43-9

(pos.-working photoresists contg.)

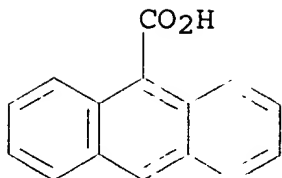
RN 79079-43-9 HCA

CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with oxiranylmethyl 2-methyl-2-propenoate, 9-anthracenecarboxylate (9CI) (CA INDEX NAME)

CM 1

CRN 723-62-6

CMF C15 H10 O2



CM 2

CRN 26141-88-8

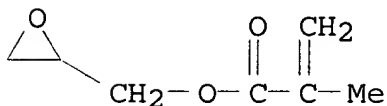
CMF (C7 H10 O3 . C5 H8 O2)x

CCI PMS

CM 3

CRN 106-91-2

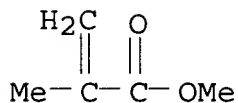
CMF C7 H10 O3



CM 4

CRN 80-62-6

CMF C5 H8 O2



IC G03C001-72; C08F002-48; C08F008-00; C08F299-00

CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic Processes)

IT 104-55-2D, reaction products with poly(iso-Pr Me ketone)
 78992-96-8D, reaction products with cinnamaldehyde 78992-99-1
 79079-43-9 79079-44-0 79079-45-1
 (pos.-working photoresists contg.)

=> file reg

FILE 'REGISTRY' ENTERED AT 10:48:06 ON 14 FEB 2002
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=> display history full l1-

FILE 'REGISTRY' ENTERED AT 09:41:40 ON 14 FEB 2002
E POLYACRYLIC/PCT

L1 257490 SEA POLYACRYLIC/PCT

FILE 'LREGISTRY' ENTERED AT 09:42:18 ON 14 FEB 2002
E ANTHRACENE/CN

L2 1 SEA ANTHRACENE/CN
D RN
D RSD

FILE 'REGISTRY' ENTERED AT 09:43:47 ON 14 FEB 2002

L3 25700 SEA 2508.17.56/RID
L4 424 SEA L1 AND L3

FILE 'HCA' ENTERED AT 09:46:30 ON 14 FEB 2002

L5 308 SEA L4
L6 226324 SEA CROSSLINK? OR CROSS?(2A)LINK?
E COATINGS/CV
L7 14197 SEA COATINGS/CV
E COATING MATERIALS/CV
L8 192691 SEA "COATING MATERIALS"/CV
E COATING PROCESS/CV
L9 88928 SEA "COATING PROCESS"/CV
L10 35 SEA L5 AND L6
L11 5 SEA L10 AND (L7 OR L8 OR L9)

FILE 'LCA' ENTERED AT 09:50:42 ON 14 FEB 2002

L12 7645 SEA (FILM? OR THINFILM? OR LAYER? OR OVERLAY? OR
OVERLAID? OR LAMIN? OR LAMEL? OR SHEET? OR LEAF? OR
FOIL? OR COAT? OR TOPCOAT? OR OVERCOAT? OR VENEER? OR
SHEATH? OR COVER? OR ENVELOP? OR ENCAS? OR ENWRAP? OR
OVERSPREAD?)/BI,AB
L13 10450 SEA (SUBSTRAT? OR SURFACE? OR BASE# OR SUBSTRUCT? OR
UNDERSTRUCT? OR UNDERLAY? OR FOUNDATION? OR PANE? OR
DISK? OR DISC# OR WAFER?)/BI,AB

FILE 'HCA' ENTERED AT 09:53:05 ON 14 FEB 2002

L14 417206 SEA L12(2A)L13
L15 393724 SEA REFLECT? OR ANTIREFLECT? OR NONREFLECT?
L16 2 SEA L10 AND L14
L17 8 SEA L10 AND L15

L18 13 SEA L11 OR L16 OR L17
L19 22 SEA L10 NOT L18

FILE 'LREGISTRY' ENTERED AT 09:59:25 ON 14 FEB 2002

E BENZOGUANAMINE/CN
L20 1 SEA BENZOGUANAMINE/CN
D SCAN
D RN
E MELAMINE/CN
L21 1 SEA MELAMINE/CN
D SCAN
D RN

FILE 'REGISTRY' ENTERED AT 10:03:48 ON 14 FEB 2002

L22 503 SEA 91-76-9/CRN
L23 7009 SEA 108-78-1/CRN
L24 472 SEA L22 AND PMS/CI
L25 98 SEA L24 AND L23
L26 0 SEA L24 AND L3
L27 0 SEA L22 AND L3

FILE 'HCA' ENTERED AT 10:05:37 ON 14 FEB 2002

L28 1088 SEA L24
L29 260 SEA L25
L30 66 SEA L29 AND L6
L31 14 SEA L30 AND (L7 OR L8 OR L9)
L32 0 SEA L30 AND L15
L33 4 SEA L29 AND L15
L34 13 SEA L30 AND L14
L35 3 SEA L31 AND L34
L36 271 SEA L28 AND L6
L37 5 SEA L36 AND L15
L38 47 SEA L36 AND L14
L39 18 SEA L38 AND (L7 OR L8 OR L9)
L40 12 SEA L33 OR L35 OR L37
L41 11 SEA L31 NOT L40
L42 10 SEA L34 NOT (L40 OR L41)
L43 14 SEA L39 NOT (L40 OR L41 OR L42)

=> file hca

FILE 'HCA' ENTERED AT 10:48:26 ON 14 FEB 2002

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=> d l40 1-12 cbib abs hitstr hitind

L40 ANSWER 1 OF 12 HCA COPYRIGHT 2002 ACS

135:249216 Surface-emitting light guide apparatus. Nakanishi, Eiji
(Nichia Chemical Industries Co., Ltd., Japan). Jpn. Kokai Tokkyo
Koho JP 2001250410 A2 20010914, 6 pp. (Japanese). CODEN: JKXXAF.
APPLICATION: JP 2000-57221 20000302.

AB The app., suitable for use as back lights for liq. crystal display
devices, comprise: a LED light source; an acrylic polymer light
guide contg. a benzoguanamine and/or a polyethyleneterephthalate
resin particle; a **reflector** surface at the bottom layer of
the light guide plate.

IT 25035-72-7, Epostar GP-H 100

(Epostar GP-H 100; surface-emitting light guide app.)

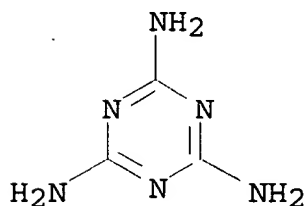
RN 25035-72-7 HCA

CN Formaldehyde, polymer with 6-phenyl-1,3,5-triazine-2,4-diamine and
1,3,5-triazine-2,4,6-triamine (9CI) (CA INDEX NAME)

CM 1

CRN 108-78-1

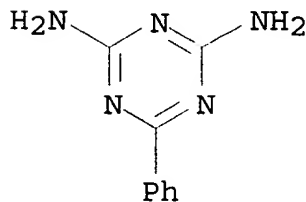
CMF C3 H6 N6



CM 2

CRN 91-76-9

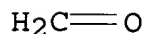
CMF C9 H9 N5



CM 3

CRN 50-00-0

CMF C H2 O



IC ICM F21V008-00
ICS F21V008-00; H01L033-00
CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)
ST plastic particle back light LED **reflector**
IT Electroluminescent devices
Light
Liquid crystals
Optical imaging devices
Optical **reflectors**
Optical switches
Optical waveguides
(surface-emitting light guide app.)
IT 25035-72-7, Epostar GP-H 100
(Epostar GP-H 100; surface-emitting light guide app.)

L40 ANSWER 2 OF 12 HCA COPYRIGHT 2002 ACS
134:35000 Silver halide photographic material for photographic paper. Nakamura, Takeshi; Yamazaki, Chikamasa; Nishijima, Toyoki (Konica Co., Japan). Jpn. Kokai Tokkyo Koho JP 2000338627 A2 20001208, 24 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1999-146525 19990526.

AB In the title photog. material possessing Ag halide emulsion layers and non-photosensitive hydrophilic colloid layers on a **reflective** support having a resin layer on the both sides of a base paper, the resin layer on the emulsion layer side of the support possesses either .gtoreq.1 resin layer including a biaxially drawn polymer sheet or .gtoreq.1 electron beam-curing resin layer and a hydrophilic colloid layer contg. gelatin .gtoreq.1 g/m2 and a mat agent .gtoreq.0.5 g/m2 is formed on the opposite side to the emulsion layer. The material, possessing Ag halide emulsion layers and non-photosensitive hydrophilic colloid layers on a **reflective** support including a polyester film, may contain a white pigment in the support and the above hydrophilic colloid layer may be formed on the opposite side of the support to the emulsion layer. In the material possessing .gtoreq.1 Ag halide emulsion layer and .gtoreq.1 non- photosensitive hydrophilic colloid layer on a **reflective** support having a resin layer on the both sides of a base paper, Taber stiffness of the base paper in the paper-making direction may be .gtoreq.20 g.cm and the above hydrophilic colloid layer may be formed on the opposite side of the support to the emulsion layer. The material shows good writability and ink jet recording properties on the back side and improved scratch resistance.

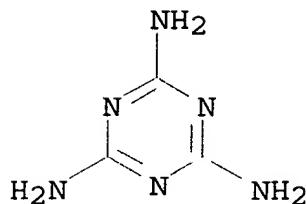
IT 25035-72-7, Benzoguanamine-formaldehyde-melamine copolymer
(matting agent; photog. paper having resin layers and hydrophilic colloid backcoat layer contg. matting agent)

RN 25035-72-7 HCA
CN Formaldehyde, polymer with 6-phenyl-1,3,5-triazine-2,4-diamine and 1,3,5-triazine-2,4,6-triamine (9CI) (CA INDEX NAME)

CM 1

CRN 108-78-1

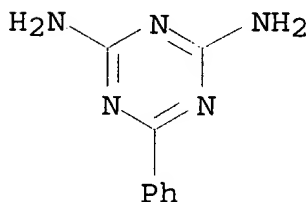
CMF C3 H6 N6



CM 2

CRN 91-76-9

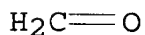
CMF C9 H9 N5



CM 3

CRN 50-00-0

CMF C H2 O



IC ICM G03C001-76

ICS B41M005-00; G03C001-79; G03C001-95

CC 74-2 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 38

IT 1344-28-1, Alumina, uses 7631-86-9, Silica, uses 7727-43-7, Barium sulfate 9003-08-1, Melamine-formaldehyde copolymer 9003-53-6, Polystyrene 9003-63-8, Poly(butyl methacrylate) 9011-14-7, Poly(methyl methacrylate) 25035-72-7, Benzoguanamine-formaldehyde-melamine copolymer

(matting agent; photog. paper having resin layers and hydrophilic colloid backcoat layer contg. matting agent)

L40 ANSWER 3 OF 12 HCA COPYRIGHT 2002 ACS

132:195584 Manufacture of liquid crystalline films with high strength

for optical uses. Hirayama, Takayuki; Takagi, Akira; Suzuki, Keisuke (Nisseki Mitsubishi K. K., Japan). Jpn. Kokai Tokkyo Koho JP 2000073063 A2 20000307, 13 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1999-36055 19990215. PRIORITY: JP 1998-166664 19980615.

AB Liq. cryst. materials contg. low.-mol.-wt. liq. crystals and/or polymeric liq. crystals and thermally polymerizable compds. are applied on substrates and heat-treated to give the liq. cryst. films. Thus, a nematic liq. cryst. polyester from terephthalic acid 40, 2,6-naphthalenedicarboxylic acid 40, catechol diacetate 85, and p-acetoxybenzoic acid 80 mmol was mixed with 20% Nikalac MS 21 (methylolated melamine) in PhOH-tetrachloroethane mixt., applied on a polyimide-coated glass substrate, and heated at 220.degree. for 30 min to give a 0.6 .mu.m-thick film showing retardation 125 nm and pencil hardness 3H.

IT **260048-98-4P**, p-Acetoxybenzoic acid-benzoguanamine-catechol diacetate-dimethyl terephthalate-formaldehyde-(R)-2-methylbutanediol-methylhydroquinone diacetate-terephthalic acid copolymer (manuf. of **crosslinked** liq. cryst. polyester films with high strength for optical uses)

RN 260048-98-4 HCA

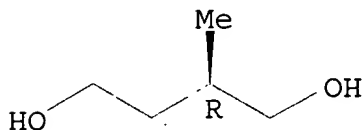
CN 1,4-Benzenedicarboxylic acid, polymer with 4-(acetyloxy)benzoic acid, dimethyl 1,4-benzenedicarboxylate, formaldehyde, (2R)-2-methyl-1,4-butanediol, 2-methyl-1,4-phenylene diacetate, 1,2-phenylene diacetate and 6-phenyl-1,3,5-triazine-2,4-diamine (9CI) (CA INDEX NAME)

CM 1

CRN 22644-28-6

CMF C5 H12 O2

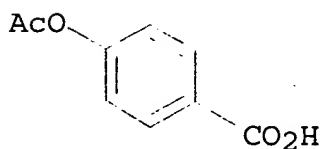
Absolute stereochemistry. Rotation (+).



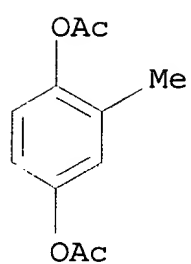
CM 2

CRN 2345-34-8

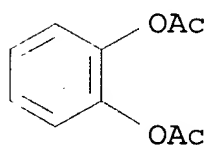
CMF C9 H8 O4



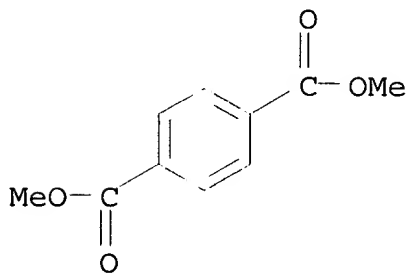
CM 3

CRN 717-27-1
CMF C11 H12 O4

CM 4

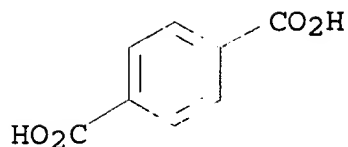
CRN 635-67-6
CMF C10 H10 O4

CM 5

CRN 120-61-6
CMF C10 H10 O4

CM 6

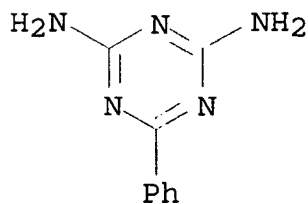
CRN 100-21-0
CMF C8 H6 O4



CM 7

CRN 91-76-9

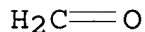
CMF C9 H9 N5



CM 8

CRN 50-00-0

CMF C H2 O



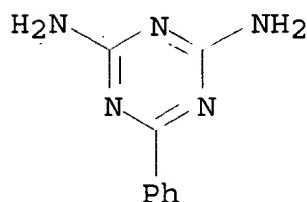
- IC ICM C09K019-56
ICS C08J005-18; C08L101-00; G02B005-30; G02F001-1336
- CC 38-3 (Plastics Fabrication and Uses)
Section cross-reference(s): 73, 74, 75
- IT Polyesters, uses
(aminoplast-, liq.-cryst.; manuf. of **crosslinked** liq. cryst. polyester films with high strength for optical uses)
- IT Liquid crystal displays
Optical films
Optical instruments
Optical **reflectors**
Plastic films
(manuf. of **crosslinked** liq. cryst. polyester films with high strength for optical uses)
- IT Polyesters, uses
(phenolic, liq.-cryst.; manuf. of **crosslinked** liq. cryst. polyester films with high strength for optical uses)
- IT Aminoplasts
Phenolic resins, uses
(polyester-, liq.-cryst.; manuf. of **crosslinked** liq. cryst. polyester films with high strength for optical uses)

- IT Liquid crystals, polymeric
(polyesters; manuf. of **crosslinked** liq. cryst.
polyester films with high strength for optical uses)
- IT **Crosslinking**
(thermal; manuf. of **crosslinked** liq. cryst. polyester
films with high strength for optical uses)
- IT 260048-97-3P, p-Acetoxybenzoic acid-catechol diacetate-formaldehyde-
melamine-2,6-naphthalenedicarboxylic acid-terephthalic acid
copolymer **260048-98-4P**, p-Acetoxybenzoic
acid-benzoguanamine-catechol diacetate-dimethyl terephthalate-
formaldehyde-(R)-2-methylbutanediol-methylhydroquinone
diacetate-terephthalic acid copolymer 260049-91-0P,
p-Acetoxybenzoic acid-catechol diacetate-2,6-naphthalenedicarboxylic
acid-terephthalic acid copolymer, ester with p-decyloxybenzoic acid,
polymer with N 730
(manuf. of **crosslinked** liq. cryst. polyester films with
high strength for optical uses)
- L40 ANSWER 4 OF 12 HCA COPYRIGHT 2002 ACS
- 132:130086 Light-controlling sheet and **reflection**-type liquid
crystal display using it. Honda, Takashi (Sumitomo Chemical Co.,
Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 2000035506 A2 20000202, 8
pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1998-203367
19980717.
- AB The light-controlling sheet is obtained by UV irradiation from a desired
direction to a film material of a composition containing (A) 100 parts mixtures
of .gtoreq.2 photopolymerizable monomers or oligomers with different
refractive index one another and (B) 0.01-1 part 1-5-.mu.m particles
with the difference of refractive index from the mixtures.
.gtoreq.0.03. The liquid crystal display has the above
light-controlling sheet in front of liquid crystal cells. The display
shows high luminance from the view with oblique angles.
- IT **26160-89-4**, Epostar MS
(light-controlling sheet for **reflection**-type liquid
crystal display)
- RN 26160-89-4 HCA
- CN Formaldehyde, polymer with 6-phenyl-1,3,5-triazine-2,4-diamine (9CI)
(CA INDEX NAME)

CM 1

CRN 91-76-9

CMF C9 H9 N5



CM 2

CRN 50-00-0

CMF C H2 O

 $\text{H}_2\text{C}=\text{O}$

- IC ICM G02B005-02
ICS C08F002-48; G02F001-1335; C08F290-06
- CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 38
- ST light controlling sheet UV photopolymn; **reflection** liq crystal display light control sheet
- IT Aminoplasts
(Epostar S 12; light-controlling sheet for **reflection** -type liq. crystal display)
- IT Optical films
(light-controlling sheet for **reflection**-type liq. crystal display)
- IT Polymerization
(photopolymn.; light-controlling sheet for **reflection** -type liq. crystal display)
- IT Liquid crystal displays
(**reflection**-type; light-controlling sheet for **reflection**-type liq. crystal display)
- IT 9003-08-1, Formaldehyde-melamine copolymer
(Epostar S 12; light-controlling sheet for **reflection** -type liq. crystal display)
- IT 7631-86-9, Silica, uses
(Seahostar KEP 250; light-controlling sheet for **reflection**-type liq. crystal display)
- IT 185756-13-2P, Hexamethylene diisocyanate-2-hydroxyethyl acrylate-2-hydroxy-3-phenoxypropyl acrylate-polypropylene glycol-2,4,6-tribromophenyl acrylate copolymer
(**crosslinked**; light-controlling sheet for **reflection**-type liq. crystal display)
- IT 26160-89-4, Epostar MS
(light-controlling sheet for **reflection**-type liq. crystal display)
- L40 ANSWER 5 OF 12 HCA COPYRIGHT 2002 ACS
- 130:318569 Electrophotographic photoreceptor containing flat organic resin particles, image-recording method, and apparatus. Kuwahara, Mieko; Mochizuki, Fumitaka; Yasuda, Kenichi (Konica Co., Japan). Jpn. Kokai Tokkyo Koho JP 11109663 A2 19990423 Heisei, 8 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1997-266272 19970930.
- AB The photoreceptor comprises an elec. conductive support and a photosensitive layer contg. flat org. resin particles. Alternatively, the photoreceptor comprises the support, an

intermediate layer contg. the flat particles, and a photosensitive layer. Digital images using laser is formed on the obtained photoreceptor. The app. involves the photoreceptor having thereon plural colored developers and a device for transferring them once to a transfer sheet. The photoreceptor prevents to cause interference fringes by laser exposure, providing images with high resolving power without effect of **reflected** laser. The photoreceptor prevents interference fringes from appearing when it is subjected to laser exposure so that images with high resolu. can be obtained.

IT 25035-72-7, Benzoguanamine-formaldehyde-melamine copolymer
(flat particles; electrophotog. photoreceptor contg. flat resin particles preventing interference fringe from appearing under laser exposure)

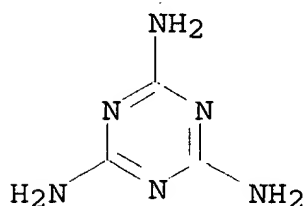
RN 25035-72-7 HCA

CN Formaldehyde, polymer with 6-phenyl-1,3,5-triazine-2,4-diamine and 1,3,5-triazine-2,4,6-triamine (9CI) (CA INDEX NAME)

CM 1

CRN 108-78-1

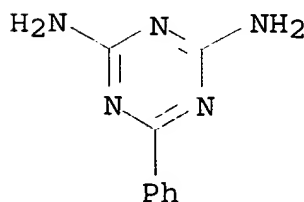
CMF C3 H6 N6



CM 2

CRN 91-76-9

CMF C9 H9 N5



CM 3

CRN 50-00-0

CMF C H2 O

H₂C=O

IC ICM G03G005-05
ICS G03G005-04; G03G005-047; G03G005-06

CC 74-3 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 38

IT 9002-84-0, PTFE 9003-53-6, Polystyrene 9004-35-7, Cellulose acetate 9011-14-7, Poly(methyl methacrylate) 25035-72-7, Benzoguanamine-formaldehyde-melamine copolymer (flat particles; electrophotog. photoreceptor contg. flat resin particles preventing interference fringe from appearing under laser exposure)

L40 ANSWER 6 OF 12 HCA COPYRIGHT 2002 ACS
125:224722 Water-based modified amino resin compositions with boiling water and steam sterilization resistance. Myazaki, Eiichiro; Nakajima, Tatsunobu; Kawamoto, Masayuki; Obata, Keisuke; Murakami, Tsukasa (Mitsui Toatsu Chemicals, Japan). Jpn. Kokai Tokkyo Koho JP 08165408 A2 19960625 Heisei, 7 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1995-259837 19951006. PRIORITY: JP 1994-246136 19941012.

AB Title compns., useful for coatings, inks, and adhesives, etc., comprise reaction products of amino compds., HCHO, polyhydroxycarboxylic acids, and alcs. Thus, benzoguanamine 187, paraformaldehyde 113, dimethylolpropionic acid 40, and BuOH 593 parts were reacted in the presence of triethanolamine, dibutyltin oxide, and p-toluenesulfonic acid and neutralized with dimethylethanolamine in butyl Cellosolve to give a 70%-nonvolatile resin, 30 parts of which were mixed with 70 parts Almatex WA 911 (acrylic resin), applied on a tin plate, and baked to give a test piece showing retention of gloss and no blister on the surface after 1 h in boiling water.

IT 25035-72-7DP, Benzoguanamine-formaldehyde-melamine copolymer, reaction products with dimethylolpropionic acid and butanol
(water-based modified amino resins for coatings with boiling water and steam resistance)

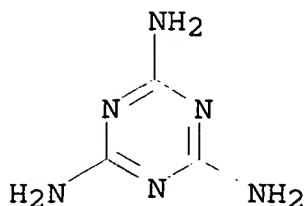
RN 25035-72-7 HCA

CN Formaldehyde, polymer with 6-phenyl-1,3,5-triazine-2,4-diamine and 1,3,5-triazine-2,4,6-triamine (9CI) (CA INDEX NAME)

CM 1

CRN 108-78-1

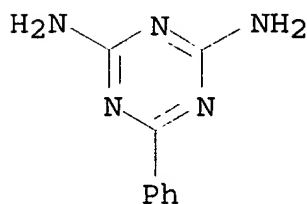
CMF C3 H6 N6



CM 2

CRN 91-76-9

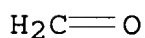
CMF C9 H9 N5



CM 3

CRN 50-00-0

CMF C H2 O



IC ICM C08L061-20

ICS C08G012-26; C09D161-20

CC 42-10 (Coatings, Inks, and Related Products)

Section cross-reference(s): 37, 38

ST water **based** amino resin **coating**; oxycarboxy modified amino resin; benzoguanamine formaldehyde copolymer water **based coating**; dimethylolpropionic acid modified amino resin; butanol modified amino resin coating; boiling water resistance aminoplast coating; acrylic resin aminoplast hardener coating; steam resistance modified amino resin

IT **Crosslinking** agents

(water-based modified amino resins for coatings with boiling water and steam resistance)

IT **Coating materials**

(water-thinned, modified amino resins for coatings with boiling water and steam resistance)

IT 71-36-3DP, 1-Butanol, reaction products with amino resins

149-91-7DP, Gallic acid, reaction products with amino resins

4767-03-7DP, reaction products with amino resins

25035-72-7DP, Benzoguanamine-formaldehyde-melamine copolymer, reaction products with dimethylolpropionic acid and butanol 26160-89-4DP, Benzoguanamine-formaldehyde copolymer, reaction products with dimethylolpropionic acid and butanol 56743-27-2DP, reaction products with amino resins 181894-69-9DP, reaction products with amino resins (water-based modified amino resins for coatings with boiling water and steam resistance)

L40 ANSWER 7 OF 12 HCA COPYRIGHT 2002 ACS

120:247475 Anticorrosive, self-lubricating, processable, zinc alloy-plated steel panels. Myoshi, Tatsuya; Ookuma, Toshuki; Yamashita, Masaaki; Watanabe, Toyofumi; Kosaka, Norio (Nippon Kokan Kk, Japan). Jpn. Kokai Tokkyo Koho JP 05263267 A2 19931012 Heisei, 13 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1992-89606 19920313.

AB The title panels are prep'd. by forming chromated Zn (alloy)-plated steel panels with Cr amts. of 5-200 mg/m², followed by covering with org. solvent compns. contg. thermosetting resins, 1-30 phr solid lubricants (e.g., polyethylene with av. mol. wt. .ltoreq.5000), and 3-30 phr anticorrosive pigments to a thickness of 0.3-10.0 .mu.m. A compn. contained SrCrO₄, powd. polyethylene, melamine resin-modified adipic acid-glycerol-1,6-hexanediol-neopentyl glycol-phthalic acid copolymer, Epiclon 1050, and melamine resin.

IT 154582-07-7

(coatings contg., on steel panels, for processability and lubricity)

RN 154582-07-7 HCA

CN 1,2-Benzenedicarboxylic acid, polymer with (chloromethyl)oxirane, 2,2-dimethyl-1,3-propanediol, formaldehyde, hexanedioic acid, 1,6-hexanediol, 4,4'-(1-methylethylidene)bis[phenol], 6-phenyl-1,3,5-triazine-2,4-diamine, 1,2,3-propanetriol and 1,3,5-triazine-2,4,6-triamine (9CI) (CA INDEX NAME)

CM 1

CRN 629-11-8

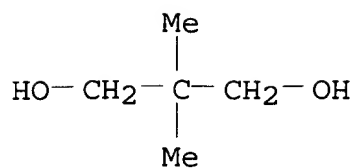
CMF C6 H14 O2

HO-(CH₂)₆-OH

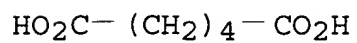
CM 2

CRN 126-30-7

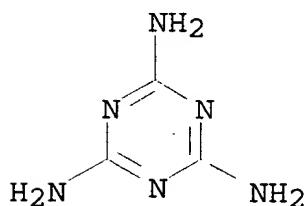
CMF C5 H12 O2



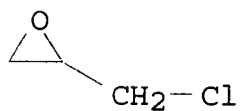
CM 3

CRN 124-04-9
CMF C6 H10 O4

CM 4

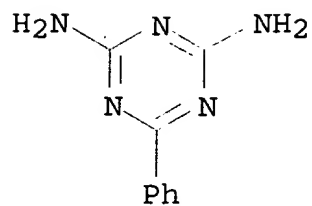
CRN 108-78-1
CMF C3 H6 N6

CM 5

CRN 106-89-8
CMF C3 H5 Cl O

CM 6

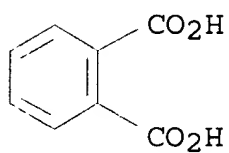
CRN 91-76-9
CMF C9 H9 N5



CM 7

CRN 88-99-3

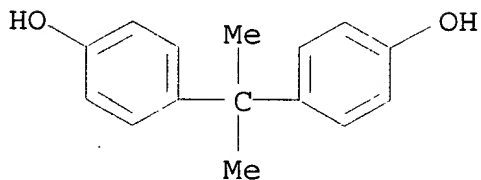
CMF C8 H6 O4



CM 8

CRN 80-05-7

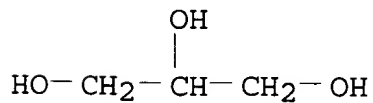
CMF C15 H16 O2



CM 9

CRN 56-81-5

CMF C3 H8 O3



CM 10

CRN 50-00-0

CMF C H2 O

H₂C=O

IC ICM C23C028-00
ICS B05D007-14; B32B015-08; C23C022-00
CC 42-10 (Coatings, Inks, and Related Products)
Section cross-reference(s): 55
IT Aminoplasts
(**crosslinkers**, epoxy resin-polyester coatings contg.,
on steel panels)
IT Lubricants
(polyethylene powders, in thermosetting **coatings** on
steel **panels**)
IT **Coating materials**
(anticorrosive, thermosetting resin- and powd.
polyethylene-contg., on steel panels)
IT 124679-20-5 154582-05-5 154582-06-6 **154582-07-7**
154582-08-8
(coatings contg., on steel panels, for processability and
lubricity)
IT 12597-69-2
(lubricants, polyethylene powders, in thermosetting
coatings on steel **panels**)
IT 9002-88-4, Polyethylene
(powd., in thermosetting **coatings** on steel
panels, for processability and lubricity)

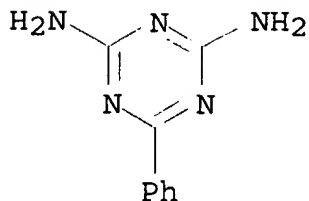
L40 ANSWER 8 OF 12 HCA COPYRIGHT 2002 ACS
113:33165 Silver-containing electrically conductive paste composition
for coatings. Obinata, Shigeru (Sumitomo Metal Mining Co., Ltd.,
Japan). Jpn. Kokai Tokkyo Koho JP 01187707 A2 19890727 Heisei, 3
pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1988-8390
19880120.
AB The title compn. contains Ag flake 70-85, an epoxy-modified resin
10-20, and a dicyandiamide deriv. **crosslinking** agent 5-10
parts. The compn. is useful for coating a **reflecting** wall
in a LED.
IT **127864-49-7 127864-50-0**
(elec. conductive coatings contg. silver and, for LEDs)
RN 127864-49-7 HCA
CN 1,3,5-Triazine-2,4-diamine, 6-phenyl-, polymer with Acryloid AT 75
(9CI) (CA INDEX NAME)

CM 1

CRN 52499-67-9
CMF Unspecified
CCI PMS, MAN
*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

CM 2

CRN 91-76-9
CMF C9 H9 N5



RN 127864-50-0 HCA
CN Imidodicarbonimidic diamide, polymer with Acryloid AT 75 and
6-phenyl-1,3,5-triazine-2,4-diamine (9CI) (CA INDEX NAME)

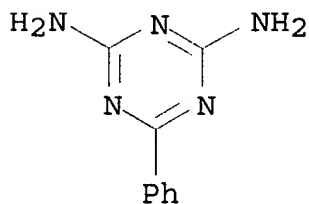
CM 1

CRN 52499-67-9
CMF Unspecified
CCI PMS, MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

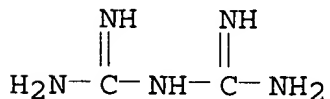
CM 2

CRN 91-76-9
CMF C9 H9 N5



CM 3

CRN 56-03-1
CMF C2 H7 N5



IC ICM H01B001-22
CC 76-3 (Electric Phenomena)
Section cross-reference(s): 42, 73
IT **Crosslinking** agents
(dicyandiamide derivs., for epoxy-modified resins, for

IT silver-contg. coatings in LEDs)
127864-49-7 127864-50-0
(elec. conductive coatings contg. silver and, for LEDs)

L40 ANSWER 9 OF 12 HCA COPYRIGHT 2002 ACS

110:137080 Novel stoving lacquers and their use in coil coating. De Jong, Hendrikus (Hunter Douglas Industries B. V., Neth.). Eur. Pat. Appl. EP 283280 A1 19880921, 8 pp. DESIGNATED STATES: R: BE, CH, DE, ES, FR, GB, IT, LI, NL, SE. (English). CODEN: EPXXDW. APPLICATION: EP 1988-302325 19880317. PRIORITY: GB 1987-6362 19870318.

AB The title lacquers provide a finish on a **reflective** surface simulating a metallic lacquer finish and comprise a transparent film-forming binder and particles (2-50 .mu.m), one of which is colored. Upon stoving the lacquer a layer is formed with transparent zones and uneven color intensity. Thus, a compn. contg. L818 (polyester) 62.0, benzoquanamine resin 15.0, hexamethoxymelamine 4.6, Solvesso 100 15.0, diacetone-alc. 20.0, p-MeC6H4SO3 0.5, yellow iron oxide 1.8, and polyamide-12 nylon (10 .mu.m) 14.0% was stoved at 225.degree. for 60 s on Al foil to give a brass-colored lacquer.

IT 119756-94-4
(binder, contg. polymer bead, for stoving lacquer with metallic luster and uneven color)

RN 119756-94-4 HCA

CN Formaldehyde, polymer with L 818, 6-phenyl-1,3,5-triazine-2,4-diamine and 1,3,5-triazine-2,4,6-triamine (9CI) (CA INDEX NAME)

CM 1

CRN 119684-02-5

CMF Unspecified

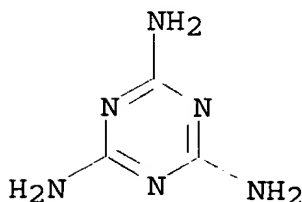
CCI PMS, MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

CM 2

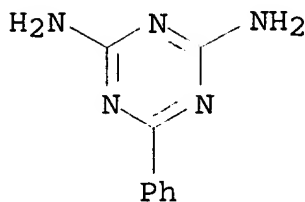
CRN 108-78-1

CMF C3 H6 N6



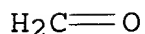
CM 3

CRN 91-76-9
CMF C9 H9 N5



CM 4

CRN 50-00-0
CMF C H2 O

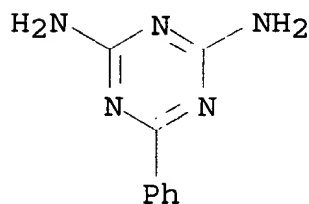


- IC ICM C09D005-29
CC 42-5 (Coatings, Inks, and Related Products)
IT 25853-89-8, Vinyl chloride-vinyl propionate copolymer 85023-89-8,
Bisphenol A-epichlorohydrin-formaldehyde-melamine copolymer
119684-30-9, UB 1256 119756-94-4
(binder, contg. polymer bead, for stoving lacquer with metallic
luster and uneven color)
- L40 ANSWER 10 OF 12 HCA COPYRIGHT 2002 ACS
101:232007 **Reflectors**. (Matsushita Electric Works, Ltd.,
Japan; Dainippon Toryo Co., Ltd.). Jpn. Kokai Tokkyo Koho JP
59098842 A2 19840607 Showa, 5 pp. (Japanese). CODEN: JKXXAF.
APPLICATION: JP 1982-209816 19821129.
- AB Substrates are coated with an aq. thermosetting acrylic compn.
contg. (A) .alpha.,.beta.-unsatd. alc.-.alpha.,.beta.-unsatd.
carboxylic acid-comonomer copolymer (solubilized by alkali
neutralization), (B) water-sol., alkylated amino resin hardener(s)
chosen from alkylated methylolmelamine, alkylated methylolurea, and
alkylated methylolbenzguanamine, and (C) a pigment (diam. <15 .mu.)
contg. body pigment and TiO₂ at A:B:C solids ratio 30-70:30-70:0-35,
coated with a glossy metal film by vapor deposition, and topped with
an oxide protective film to obtain **reflectors** for
illuminating app. Thus, a water-thinned compn. was prepd.
comprising 15% Et₃N-solublized 12:5:65:18 2-hydroxyethyl
acrylate-methacrylic acid-Me methacrylate-styrene copolymer, 15%
methylated benzoguanamine resin hardener, 10% TiO₂, and 60% 3:1
H₂O-BuOCH₂CH₂OH, spray-coated 10 .mu. thick on an Al plate, baked at
180.degree. for 40 min, coated 1000 .ANG. thick with Al vapor, and
coated 5500 .ANG. thick with quartz vapor to obtain a
reflector with total **reflection** 87%, diffused
reflection 2.0%, and excellent heat, salt water spray,
crack, and moisture resistance.

IT 26160-89-4D, methylated
 (crosslinking agents, for acrylic undercoatings in
 optical reflector manuf.)
 RN 26160-89-4 HCA
 CN Formaldehyde, polymer with 6-phenyl-1,3,5-triazine-2,4-diamine (9CI)
 (CA INDEX NAME)

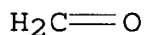
CM 1

CRN 91-76-9
 CMF C9 H9 N5



CM 2

CRN 50-00-0
 CMF C H2 O



IC B32B015-08; C09D003-80; C23C013-00; G02B005-08
 CC 42-7 (Coatings, Inks, and Related Products)
 ST optical reflector acrylic coating; aluminum coating
 optical reflector; silica protective coating optical
 reflector
 IT Aminoplasts
 (crosslinking agents, for acrylic primers in optical
 reflector manuf.)
 IT Optical reflectors
 (multilayer, acrylic polymer primers with vapor-deposited metal
 and oxide topcoats)
 IT Coating materials
 (reflective, multilayer, acrylic polymer primers with
 vapor-deposited metal and oxide topcoats)
 IT 7429-90-5, uses and miscellaneous
 (coating, vapor-deposited, on acrylic polymer primers, for
 optical reflectors)
 IT 7631-86-9, uses and miscellaneous
 (coating, vapor-deposited, on metalized acrylic polymer
 reflector films)
 IT 9011-05-6
 (crosslinking agents, for acrylic primers in optical
 reflector manuf.)

- IT 9003-08-1 **26160-89-4D**, methylated
(**crosslinking** agents, for acrylic undercoatings in
optical **reflector** manuf.)
- IT 93346-20-4 93346-21-5
(primers, contg. aminoplast hardeners, for vapor deposited metal
reflector coatings)
- L40 ANSWER 11 OF 12 HCA COPYRIGHT 2002 ACS
- 81:107558 Coating compositions for heat-painting. Kizen, Shizuro; Sato,
Yukio (Toa Gosei Chemical Industry Co., Ltd.). Japan. JP 49009082
B4 19740301 Showa, 8 pp. (Japanese). CODEN: JAXXAD. APPLICATION:
JP 1970-40979 19700515.
- AB A compn. of 50-90 parts copolymer derived from N-
hydroxymethylacrylamide or N-alkoxymethylacrylamide 5-25, acrylic
acid or methacrylic acid 0.5-5, and other vinyl comonomers 70-94.5%
which has intrinsic viscosity 0.005-0.017 l./g, 10-50 parts
aminoplast, and a solvent mixt. contg. > 50 wt.% halogenated
hydrocarbon is applied to a substrate and baked to **crosslink**
quickly at relatively low temp. Thus, 600 g 50% solids acrylic
acid-butyl acrylate-N-hydroxymethylacrylamide-styrene copolymer
[30580-68-8] having intrinsic visocosity 0.012 l./g (MeCO) derived
from 8, 352, 120, and 320 g of the resp. monomers and dissolved in
C2HCl3-xylene-BuOH (C2HCl3 75%) 75%) and 400 g 50% solids
butoxylated benzoguanamine resin [**26160-89-4**] in Cl2C:CHCl
were mixed to give a stable soln. A compn. of the soln. 500, rutile
TiO2 250, and (PhO)3P 5 g was milled to give a stable coating
material. A phosphate salt-treated steel plate was coated with the
compn. and heated 30 min at 150.deg. to give a coating with 60.deg.
reflection 94 and good xylene resistance.
- IC C09D; C08F; C08G; B44D
- CC 42-10 (Coatings, Inks, and Related Products)
- IT Coating materials
(acrylic acid-methylolacrylamide-vinyl compd. polymers,
aminoplast **crosslinking** agents for)
- IT **Crosslinking** agents
(aminoplasts, for acrylic polymer coatings)
- IT Aminoplasts
(**crosslinking** agents, for acrylic polymer coatings)
- IT 2-Propenoic acid, 2-methyl-, polymer with methylolacrylamide derivs.
and vinyl compds.
(coatings, aminoplast **crosslinking** agents for)
- IT 1,3,5-Triazine-2,4-diamine, 6-phenyl-, polymer with formaldehyde,
butylated
(**crosslinking** agents, for acrylic polymer coatings)
- IT 30580-68-8
(coatings, aminoplast **crosslinking** agents for)
- L40 ANSWER 12 OF 12 HCA COPYRIGHT 2002 ACS
- 70:69122 Cast sheets of synthetic resin film having a hard surface.
Ochi, Hiroshi; Taki, Hiroshige; Sugimoto, Kimio; Hayase, Yoshimi;
Nakazawa, Bungo (Ibigawa Electric Industry Co., Ltd.; Asahi Glass
Co., Ltd.). U.S. US 3420733 19690107, 5 pp. (English). CODEN:

USXXAM. PRIORITY: JP 1962-43559 19631007.

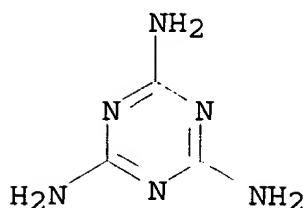
AB Cast sheets of synthetic resin having a hard glossy surface were prepd. by forming a hardened film having a thickness $<100 \mu$ of etherified methylolated polyaminotriazine and oil-modified alkyd resin on a plate surface constituting a casting cell and casting a synthetic resin having a hard surface in the cell. An adhesive layer may be applied on the hardened film before casting. Thus, 1 mole melamine was mixed with 37% formalin (6 moles HCHO) at pH 9.0 at 90.degree., methylolated, 6 moles BuOH contg. 1.0 g. p-toluenesulfonic acid (I) added, the mixt. heated 5 hrs. at 85-90.degree., cooled, 2.83 moles xylene added, the lower water layer removed, and the upper layer heated to 80.degree. under reduced pressure to give a 50% soln. of methylolated melamine butyl ether (II). To this soln. was added 50 parts 50% PhMe contg. castor oil-modified alkyd resin, Beckosol 1308 [resin from phthalic anhydride (III) 40, glycerol 16, and castor oil 44%]. The soln. was mixed with 40 parts EtOAc and 0.5 part I, filtered through a glass fiber cloth, the soln. was sprayed on tempered glass plates, heated to 130.degree. in 30 min., and hardened 30 min. at 130.degree.. The sheets were held with the hardened **film surface** facing inside and a gasket was fitted around the glass plates to form a casting cell 3 mm. thick. Me methacrylate (IV) contg. 0.5% Bz2O2 was partially polymd. with heating, cast in the casting cell, heated 2 hrs. at 60.degree., 2 hrs. at 80.degree., and 4 hrs. at 100.degree. to polymerize IV, and the cast sheet was removed and found to have 4.7% haze according to ASTM D-1003-61, compared with 24.0% for a IV sheet having no hardened **film surface layer**. A methylolated melamine-benzoguanamine butyl ether, a methylolated benzoguanamine butyl ether, and a methylolated melamine propyl ether were also used in place of II. An adhesive consisting of a 10% iso-BuCOMe soln. of Kanevylak L-A-857 [a vinyl acetate-vinyl chloride copolymer (V) adhesive] was also applied on the hardened films, heated, and dried. Other adhesives used were Bondmaster Z-782-40 (a vinyl resin adhesive agent contg. V), an EtOAc soln. of Desmokol 176 (a polyisocyanate adhesive agent) and Desmodur L [a reaction product of EtC(CH₂OH)₃ and tolylene diisocyanate], and Bondmaster C-319 (a rubber-synthetic resin adhesive agent consisting essentially of synthetic rubber and V). A casting soln. of Polylite ODR-426 (70 parts unsatd. polyester of 1 mole maleic anhydride, 2 moles II, 2 moles propylene glycol, 30 parts **crosslinking** agent, 7 parts IV, and 23 parts styrene) 80, IV 20, and Bz2O2 0.5 part was also prepd., cast in the cell, heated 2 hrs. at 40.degree., 4 hrs. at 60.degree., and 1 hr. at 80.degree. to give a sheet of 4.5% haze.

IT 25035-72-7
(alkyl ethers, coatings from alkyd resins and, on polyacrylate cast sheets)

RN 25035-72-7 HCA

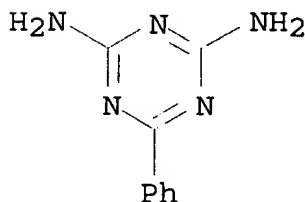
CN Formaldehyde, polymer with 6-phenyl-1,3,5-triazine-2,4-diamine and 1,3,5-triazine-2,4,6-triamine (9CI) (CA INDEX NAME)

CRN 108-78-1
CMF C3 H6 N6



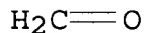
CM 2

CRN 91-76-9
CMF C9 H9 N5



CM 3

CRN 50-00-0
CMF C H2 O



NCL 161231000

CC 37 (Plastics Fabrication and Uses)

IT **Coating materials**

(alkyd resin-etherified methylolated polyaminotriazine deriv. mixts., on acrylic polymer cast sheets)

IT 25035-72-7

(alkyl ethers, coatings from alkyd resins and, on polyacrylate cast sheets)

=> d 141 1-11 cbib abs hitstr hitind

L41 ANSWER 1 OF 11 HCA COPYRIGHT 2002 ACS

134:368313 Manufacture of thermally curable resin dispersions and storage-stable aqueous coatings therefrom. Obayashi, Ryoichi;

Onishi, Kiyoshi (Dainippon Ink and Chemicals, Inc., Japan). Jpn. Kokai Tokkyo Koho JP 2001139766 A2 20010522, 21 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1999-325327 19991116.

AB Title dispersions are prepd. by emulsion polyimg. COOH-contg. vinyl compds. and COOH-excluded **crosslinking** group-contg. vinyl compds. (A) to form vinyl resins, neutralizing the vinyl resins, and dispersing with aminoplasts contg. function groups reactive to **crosslinking** groups of A. An dispersion contg. acrylic acid-Bu acrylate-2-hydroxyethyl methacrylate-Me methacrylate copolymer Et3N salt and benzoguanamine-HCHO resin was mixed with Cymel 325, water, Bu Cellosolve, and p-toluenesulfonic acid to form an aq. coating with storage stability at 50.degree. for 3 mo and was spread on a plate and baked to form a film having good processability and blister resistance after 30 min in boiling water or under 130.degree. steam.

IT 339984-34-8P, Acrylic acid-butyl acrylate-ethyl acrylate-N-isobutoxymethylacrylamide-styrene-Aqualon HS 10-formaldehyde-benzoguanamine-melamine-Epikote 1001 phosphate copolymer triethylamine salt (aq. dispersions contg. acrylic resin salts and aminoplasts for storage-stable aq. coatings with hot water and seam resistance)

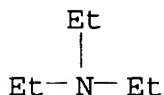
RN 339984-34-8 HCA

CN 2-Propenoic acid, polymer with butyl 2-propenoate, (chloromethyl)oxirane polymer with 4,4'-(1-methylethylidene)bis[phenol] phosphate, ethenylbenzene, ethyl 2-propenoate, formaldehyde, N-[(2-methylpropoxy)methyl]-2-propenamide, 6-phenyl-1,3,5-triazine-2,4-diamine, .alpha.-sulfo-.omega.-[4-nonyl-2-(1-propenyl)phenoxy]poly(oxy-1,2-ethanediyl) ammonium salt and 1,3,5-triazine-2,4,6-triamine, compd. with N,N-diethylethanamine (9CI) (CA INDEX NAME)

CM 1

CRN 121-44-8

CMF C6 H15 N



CM 2

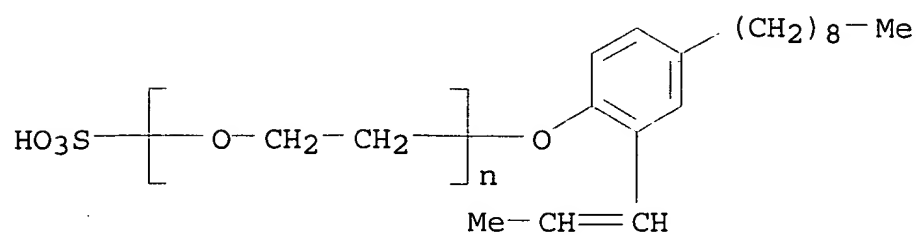
CRN 339984-33-7

CMF ((C15 H16 O2 . C3 H5 Cl O)x . C9 H9 N5 . C8 H15 N O2 . C8 H8 . C7 H12 O2 . C5 H8 O2 . C3 H6 N6 . C3 H4 O2 . (C2 H4 O)n C18 H28 O4 S . C H2 O . H3 N . x H3 O4 P)x

CCI PMS

CM 3

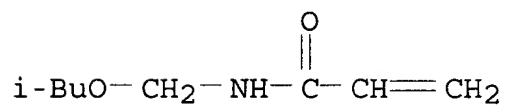
CRN 140651-97-4
 CMF (C2 H4 O)_n C18 H28 O4 S . H3 N
 CCI PMS



• NH₃

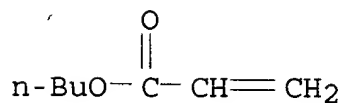
CM 4

CRN 16669-59-3
 CMF C8 H15 N O2



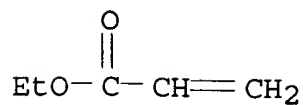
CM 5

CRN 141-32-2
 CMF C7 H12 O2



CM 6

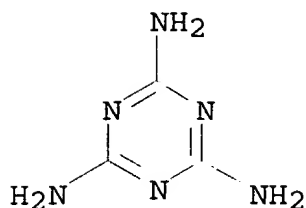
CRN 140-88-5
 CMF C5 H8 O2



CM 7

CRN 108-78-1

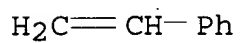
CMF C3 H6 N6



CM 8

CRN 100-42-5

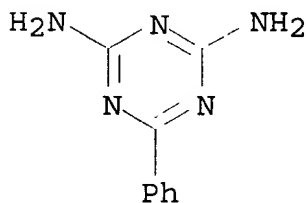
CMF C8 H8



CM 9

CRN 91-76-9

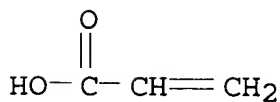
CMF C9 H9 N5



CM 10

CRN 79-10-7

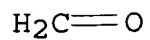
CMF C3 H4 O2



CM 11

CRN 50-00-0

CMF C H2 O



CM 12

CRN 63194-31-0

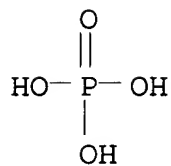
CMF (C15 H16 O2 . C3 H5 Cl O)x . x H3 O4 P

CDES 8:GD

CM 13

CRN 7664-38-2

CMF H3 O4 P



CM 14

CRN 25068-38-6

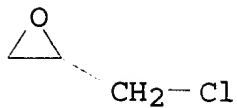
CMF (C15 H16 O2 . C3 H5 Cl O)x

CCI PMS

CM 15

CRN 106-89-8

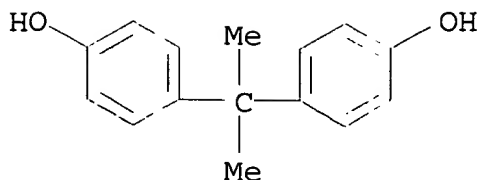
CMF C3 H5 Cl O



CM 16

CRN 80-05-7

CMF C15 H16 O2



- IC ICM C08L057-10
ICS C08F002-22; C08J003-03; C08J003-075; C08K005-49; C08L061-20;
C08L063-00; C09D005-02; C09D157-10; C09D161-20; C09D163-00
- CC 42-7 (Coatings, Inks, and Related Products)
- IT **Coating materials**
(heat- and water-resistant; aq. dispersions contg. acrylic resin salts and aminoplasts for storage-stable aq. coatings with hot water and seam resistance)
- IT 9003-08-1P, Cymel 325 26160-89-4P, Benzoguanamine-formaldehyde copolymer 34728-88-6P, Acrylic acid-butyl acrylate-2-hydroxyethyl methacrylate-methyl methacrylate copolymer triethylamine salt 339587-35-8P, Acrylic acid-butyl acrylate-ethyl acrylate-N-isobutoxymethyl acrylamide-styrene-formaldehyde-melamine-Aqualon HS 10 copolymer triethylamine salt 339587-38-1P, Acrylic acid-butyl acrylate-2-hydroxyethyl methacrylate-methyl methacrylate-formaldehyde-benzoguanamine-Watersol S 346 copolymer triethylamine salt 339984-26-8P, Acrylic acid-butyl acrylate-2-hydroxyethyl methacrylate-methyl methacrylate-formaldehyde-benzoguanamine-Epikote 1001 phosphate copolymer triethylamine salt 339984-28-0P, Acrylic acid-butyl acrylate-ethyl acrylate-N-isobutoxymethylacrylamide-styrene-Aqualon HS 10-formaldehyde-melamine-Epikote 1001 phosphate copolymer triethylamine salt 339984-30-4P, Acrylic acid-butyl acrylate-2-hydroxyethyl methacrylate-methyl methacrylate-formaldehyde-melamine-N-butoxymethylacrylamide-lauryl methacrylate-methacrylic acid-Epikote 1001 phosphate copolymer triethylamine and dimethylethanolamine salt 339984-32-6P, Acrylic acid-butyl acrylate-Watersol S 346-ethyl acrylate-N-isobutoxymethyl acrylamide-styrene-Aqualon HS 10-formaldehyde-melamine-Epikote 1001 phosphate copolymer triethylamine salt **339984-34-8P**, Acrylic acid-butyl acrylate-ethyl acrylate-N-isobutoxymethylacrylamide-styrene-Aqualon HS 10-formaldehyde-benzoguanamine-melamine-Epikote 1001 phosphate copolymer triethylamine salt
(aq. dispersions contg. acrylic resin salts and aminoplasts for storage-stable aq. coatings with hot water and seam resistance)
- L41 ANSWER 2 OF 11 HCA COPYRIGHT 2002 ACS
- 120:273232 Anticorrosive galvanized steel plates with lubricity and press moldability. Myoshi, Tatsuya; Ookuma, Toshuki; Yamashita, Masaaki; Watanabe, Toyofumi (Nippon Kokan Kk, Japan). Jpn. Kokai Tokkyo Koho JP 05301071 A2 19931116 Heisei, 16 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1992-131661 19920424.
- AB The title plates have a chromate layer (5-200 mg Cr/m²) and 0.3-10.0

.mu.m resin layer comprising .gtoreq.2 solvent-based thermosetting resins of different Tg 100, polyethylene (m.p. .ltoreq.130.degree.) as solid lubricant 1-30, and anticorrosive pigment 3-30 parts, wherein the thermosetting resins comprise (A) polyesters, amino resin-modified polyester obtained by partial **crosslinking** of satd. polyesters from arom. dibasic acids, satd. glycols and polyols and/or polycarboxylic acids (other than diols and dicarboxylic acids) with amino resins, (B) bisphenol epoxy resins, and (C) amino resin hardeners. An amino resin-modified polyester from phthalic acid 43, adipic acid 18, neopentyl glycol 15, 1,6-hexanediol, glycerin 20, and butylated melamine resin 33 parts was compounded 2:8 with an amino resin-modified polyester from isophthalic acid 42, adipic acid 25, 1,3-butanediol 27, trimethylolpropane 22, and butylated benzoguanamine-formaldehyde resin 25 parts. The compounded resin 75, Epiclon 1050 10, and melamine resin 15 parts were compounded to give a compn. which was used with polyethylene and silica for coating.

IT 154920-69-1 154920-70-4 154920-71-5
154920-72-6

(coatings, contg. solid lubricants and anticorrosive pigments, for chromated galvanized steel plates with good press moldability)

RN 154920-69-1 HCA

CN 1,2-Benzenedicarboxylic acid, polymer with 1,3-benzenedicarboxylic acid, 1,3-butanediol, (chloromethyl)oxirane, 2,2-dimethyl-1,3-propanediol, 2-ethyl-2-(hydroxymethyl)-1,3-propanediol, formaldehyde, hexanedioic acid, 1,6-hexanediol, 4,4'-(1-methylethylidene)bis[phenol], 6-phenyl-1,3,5-triazine-2,4-diamine, 1,2,3-propanetriol and 1,3,5-triazine-2,4,6-triamine (9CI) (CA INDEX NAME)

CM 1

CRN 629-11-8

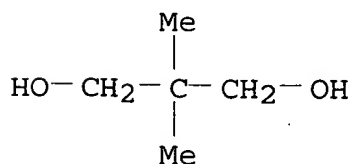
CMF C6 H14 O2

HO-(CH₂)₆-OH

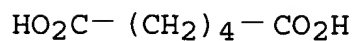
CM 2

CRN 126-30-7

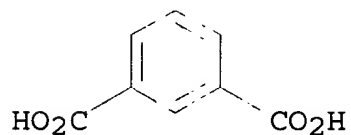
CMF C5 H12 O2



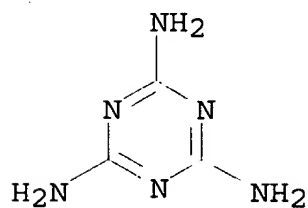
CM 3

CRN 124-04-9
CMF C6 H10 O4

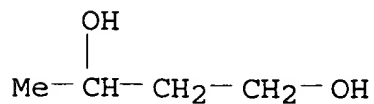
CM 4

CRN 121-91-5
CMF C8 H6 O4

CM 5

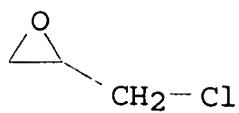
CRN 108-78-1
CMF C3 H6 N6

CM 6

CRN 107-88-0
CMF C4 H10 O2

CM 7

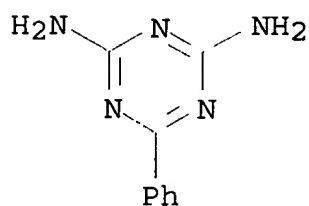
CRN 106-89-8
CMF C3 H5 Cl O



CM 8

CRN 91-76-9

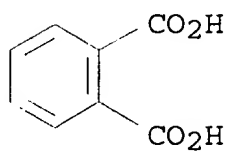
CMF C9 H9 N5



CM 9

CRN 88-99-3

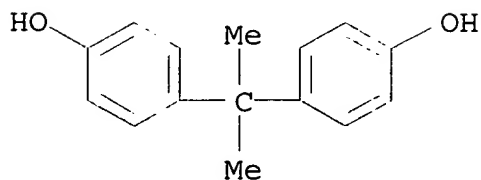
CMF C8 H6 O4



CM 10

CRN 80-05-7

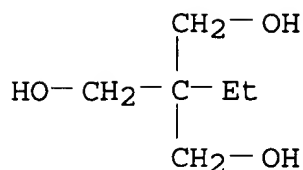
CMF C15 H16 O2



CM 11

CRN 77-99-6

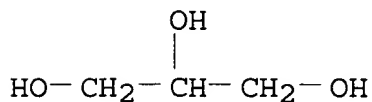
CMF C6 H14 O3



CM 12

CRN 56-81-5

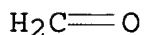
CMF C3 H8 O3



CM 13

CRN 50-00-0

CMF C H2 O



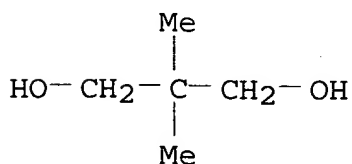
RN 154920-70-4 HCA

CN 1,3-Benzenedicarboxylic acid, polymer with 1,3-butanediol, (chloromethyl)oxirane, 2,2-dimethyl-1,3-propanediol, 2-ethyl-2-(hydroxymethyl)-1,3-propanediol, formaldehyde, hexanedioic acid, 4,4'-(1-methylethylidene)bis[phenol], 6-phenyl-1,3,5-triazine-2,4-diamine and 1,3,5-triazine-2,4,6-triamine (9CI) (CA INDEX NAME)

CM 1

CRN 126-30-7

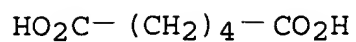
CMF C5 H12 O2



CM 2

CRN 124-04-9

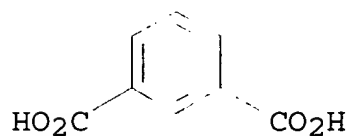
CMF C6 H10 O4



CM 3

CRN 121-91-5

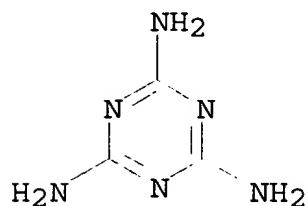
CMF C8 H6 O4



CM 4

CRN 108-78-1

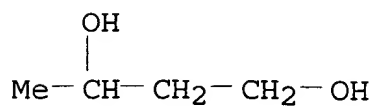
CMF C3 H6 N6



CM 5

CRN 107-88-0

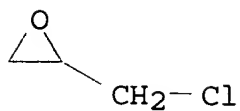
CMF C4 H10 O2



CM 6

CRN 106-89-8

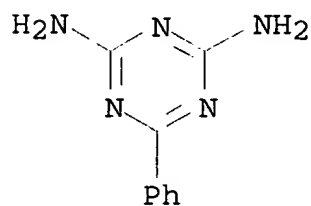
CMF C3 H5 Cl O



CM 7

CRN 91-76-9

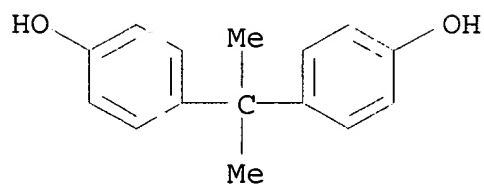
CMF C9 H9 N5



CM 8

CRN 80-05-7

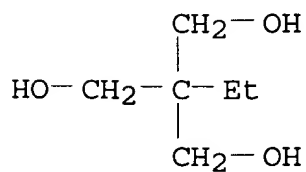
CMF C15 H16 O2



CM 9

CRN 77-99-6

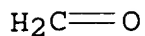
CMF C6 H14 O3



CM 10

CRN 50-00-0

CMF C H2 O



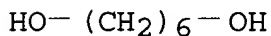
RN 154920-71-5 HCA

CN 1,2-Benzenedicarboxylic acid, polymer with 1,3-benzenedicarboxylic acid, 2,2-dimethyl-1,3-propanediol, 2-ethyl-2-(hydroxymethyl)-1,3-propanediol, formaldehyde, hexanedioic acid, 1,6-hexanediol, 6-phenyl-1,3,5-triazine-2,4-diamine, 1,2,3-propanetriol, 1,3,5-triazine-2,4,6-triamine and urea (9CI) (CA INDEX NAME)

CM 1

CRN 629-11-8

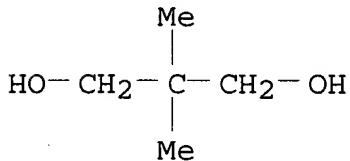
CMF C6 H14 O2



CM 2

CRN 126-30-7

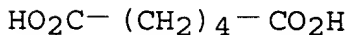
CMF C5 H12 O2



CM 3

CRN 124-04-9

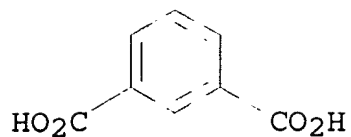
CMF C6 H10 O4



CM 4

CRN 121-91-5

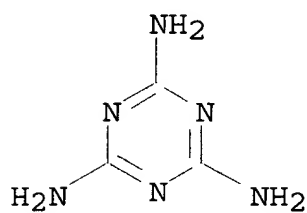
CMF C8 H6 O4



CM 5

CRN 108-78-1

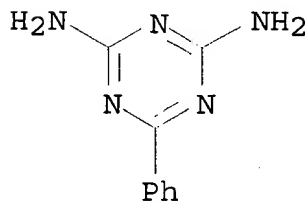
CMF C3 H6 N6



CM 6

CRN 91-76-9

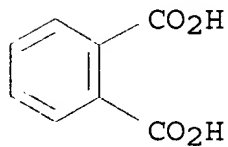
CMF C9 H9 N5



CM 7

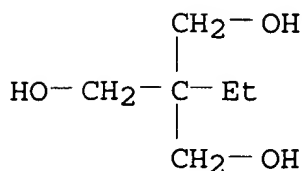
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CMF C8 H6 O4



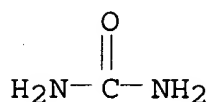
CM 8

CRN 77-99-6
CMF C6 H14 O3



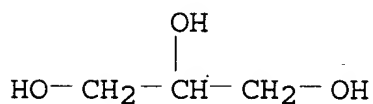
CM 9

CRN 57-13-6
CMF C H4 N2 O



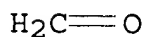
CM 10

CRN 56-81-5
CMF C3 H8 O3



CM 11

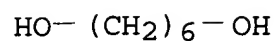
CRN 50-00-0
CMF C H2 O



RN 154920-72-6 HCA
CN 1,2-Benzenedicarboxylic acid, polymer with 1,3-benzenedicarboxylic acid, 2,2-dimethyl-1,3-propanediol, 2-ethyl-2-(hydroxymethyl)-1,3-propanediol, formaldehyde, hexanedioic acid, 1,6-hexanediol, 6-phenyl-1,3,5-triazine-2,4-diamine, 1,2,3-propanetriol and 1,3,5-triazine-2,4,6-triamine (9CI) (CA INDEX NAME)

CM 1

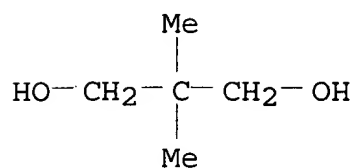
CRN 629-11-8
CMF C6 H14 O2



CM 2

CRN 126-30-7

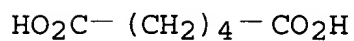
CMF C5 H12 O2



CM 3

CRN 124-04-9

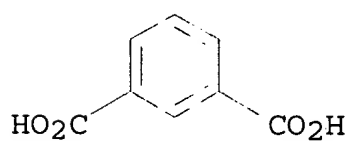
CMF C6 H10 O4



CM 4

CRN 121-91-5

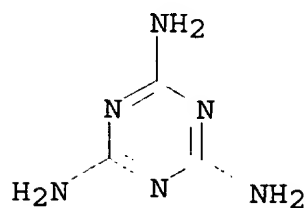
CMF C8 H6 O4



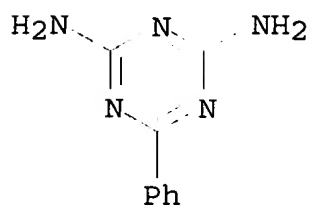
CM 5

CRN 108-78-1

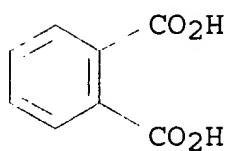
CMF C3 H6 N6



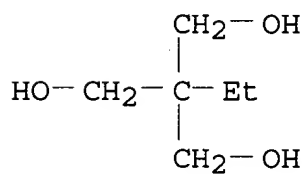
CM 6

CRN 91-76-9
CMF C9 H9 N5

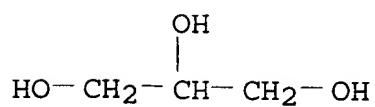
CM 7

CRN 88-99-3
CMF C8 H6 O4

CM 8

CRN 77-99-6
CMF C6 H14 O3

CM 9

CRN 56-81-5
CMF C3 H8 O3

CM 10

CRN 50-00-0

CMF C H2 O

 $\text{H}_2\text{C}=\text{O}$

IC ICM B05D007-14

ICS B05D003-10; B05D007-24; C23C022-00

CC 42-10 (Coatings, Inks, and Related Products)

Section cross-reference(s): 55

IT **Coating materials**

(anticorrosive, aminoplast-polyester-based, for galvanized steel with good press moldability)

IT **Coating process**

(chromating, in anticorrosive galvanized steel plate manuf.)

IT 154920-69-1 154920-70-4 154920-71-5

154920-72-6

(coatings, contg. solid lubricants and anticorrosive pigments, for chromated galvanized steel plates with good press moldability)

L41 ANSWER 3 OF 11 HCA COPYRIGHT 2002 ACS

119:252285 Preparation of melamine-modified epoxy-acrylic resins useful for coatings and adhesives. Kawaguchi, Kenichi; Hacha, Toshiki; Oshikubo, Toshio (Hitachi Chemical Co Ltd, Japan). Jpn. Kokai Tokkyo Koho JP 05155979 A2 19930622 Heisei, 7 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1991-320508 19911204.

AB The title resins, showing good storage stability, short curing times at high temps., and good water resistance, adhesion, and flexibility after curing, are prepd. from 50-90 parts arom. epoxy resins (no. av. mol. wt. 4500-8000) modified by resins prepd. from aldehydes and melamine and/or benzoguanamine and 10-50 parts acrylic resins contg. carboxy groups partially neutralized by NH_3 or amines. An epoxy resin prepd. from DER 343 and bisphenol A was reacted in butanol with a resin prepd. from paraformaldehyde, butanol, and melamine, mixed with a dimethylaminoethanol-neutralized Et acrylate-methacrylic acid-styrene copolymer at 100.degree., stirred at 80.degree., and mixed with H_2O to give a stable dispersion which was used to prep. cured coatings having a good appearance.

IT 25035-72-7

(coatings, contg. acrylic-epoxy resins, adherent, water-resistant)

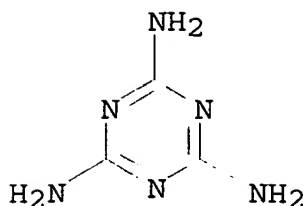
RN 25035-72-7 HCA

CN Formaldehyde, polymer with 6-phenyl-1,3,5-triazine-2,4-diamine and 1,3,5-triazine-2,4,6-triamine (9CI) (CA INDEX NAME)

CM 1

CRN 108-78-1

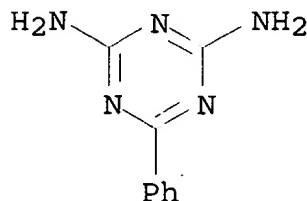
CMF C3 H6 N6



CM 2

CRN 91-76-9

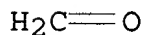
CMF C9 H9 N5



CM 3

CRN 50-00-0

CMF C H2 O



IC ICM C08G059-14

ICS C09D163-00; C09J163-00

CC 42-10 (Coatings, Inks, and Related Products)

Section cross-reference(s): 38

ST aminoplast epoxy acrylic resin curing; water resistance epoxy acrylic aminoplast; dispersion aminoplast epoxy acrylic resin; **crosslinking** aminoplast epoxy acrylic resinIT **Coating materials**

(water-resistant, aminoplast-modified epoxy-acrylic resins for)

IT 9003-08-1 25035-72-7

(coatings, contg. acrylic-epoxy resins, adherent, water-resistant)

L41 ANSWER 4 OF 11 HCA COPYRIGHT 2002 ACS

118:214994 Polyester compositions for hard coatings. Yoshida, Takao; Yamazaki, Tetsuya; Fujie, Masahiko (Arakawa Chemical Industries, Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 04366188 A2 19921218 Heisei, 6 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP

1991-168726 19910612.

AB The title compns., forming coatings on metals with good hiding power and flexibility, comprise (A) polyesters with no. av. mol. wt. (Mn) 6000-40,000 and composed of polybasic acids contg. 0-80 mol% alicyclic dibasic acids and polyols contg. 5-60 mol% HOCH₂CR₁R₂CHR₃OH (R₁-3 = H, C₁-4 alkyl; total C no. of R₁-3 is .gtoreq.3) and 0-80 mol% alicyclic diols, with alicyclic component content in the polyester being 5-80% and (B) alkyl etherated amine-HCHO resins. Thus, di-Me terephthalate 123.6, ethylene glycol 77.0, trimethylolpropane 12.3, and 2,2-diethyl-1,3-propanediol 182.4 parts were transesterified, treated with isophthalic acid 70.5, adipic acid 77.5, and hexahydrophthalic anhydride 81.7 parts, then polycondensed to give a polyester (Mn 15,000, alicyclic content 16.3%), 25.9 parts of which was blended with Tipaque CR 58 44.4, solvents 13.0, Delamine T 100S 10.1, Cymel 5.5, and Nacure 5225 1.1 parts to give title compn. A tinplate was coated with the compn. and baked at 170.degree. for 10 min to form a white coating with pencil hardness H and good hiding power and flexibility.

IT 147488-43-5P 147488-44-6P 147488-45-7P
147488-46-8P

(prepn. of, coatings, flexible, with good hardness and hiding power, for metals)

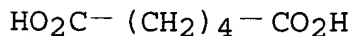
RN 147488-43-5 HCA

CN 1,3-Benzenedicarboxylic acid, polymer with 2,2-diethyl-1,3-propanediol, dimethyl 1,4-benzenedicarboxylate, 1,2-ethanediol, 2-ethyl-2-(hydroxymethyl)-1,3-propanediol, formaldehyde, hexahydro-1,3-isobenzofurandione, hexanedioic acid, 6-phenyl-1,3,5-triazine-2,4-diamine and 1,3,5-triazine-2,4,6-triamine (9CI) (CA INDEX NAME)

CM 1

CRN 124-04-9

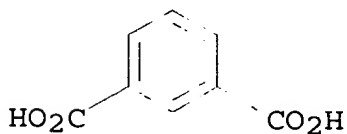
CMF C6 H10 O4



CM 2

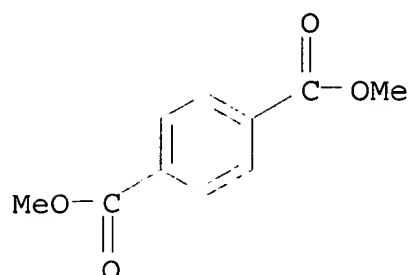
CRN 121-91-5

CMF C8 H6 O4



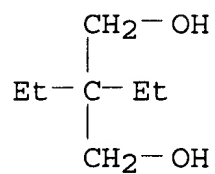
CM 3

CRN 120-61-6
CMF C10 H10 O4



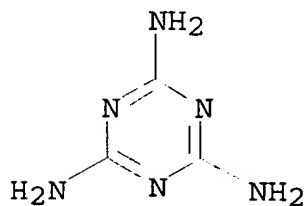
CM 4

CRN 115-76-4
CMF C7 H16 O2



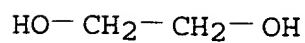
CM 5

CRN 108-78-1
CMF C3 H6 N6

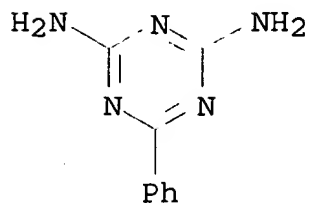


CM 6

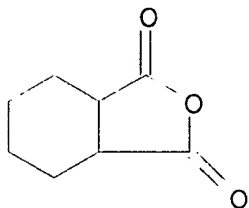
CRN 107-21-1
CMF C2 H6 O2



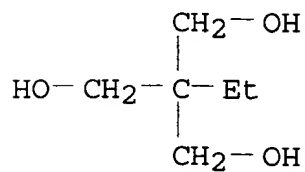
CM 7

CRN 91-76-9
CMF C9 H9 N5

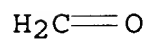
CM 8

CRN 85-42-7
CMF C8 H10 O3

CM 9

CRN 77-99-6
CMF C6 H14 O3

CM 10

CRN 50-00-0
CMF C H2 O

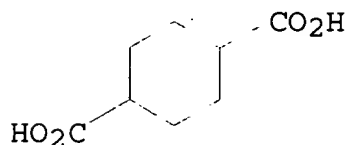
RN 147488-44-6 HCA

CN 1,4-Benzenedicarboxylic acid, dimethyl ester, polymer with
 1,4-cyclohexanedicarboxylic acid, 2,2-diethyl-1,3-propanediol,
 1,2-ethanediol, 2-ethyl-2-(hydroxymethyl)-1,3-propanediol,
 formaldehyde, 6-phenyl-1,3,5-triazine-2,4-diamine and
 1,3,5-triazine-2,4,6-triamine (9CI) (CA INDEX NAME)

CM 1

CRN 1076-97-7

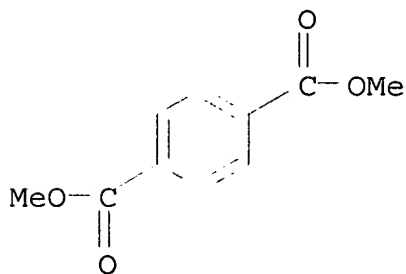
CMF C8 H12 O4



CM 2

CRN 120-61-6

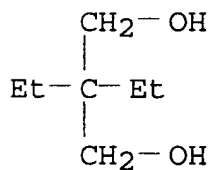
CMF C10 H10 O4



CM 3

CRN 115-76-4

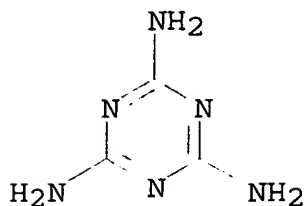
CMF C7 H16 O2



CM 4

CRN 108-78-1

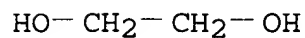
CMF C3 H6 N6



CM 5

CRN 107-21-1

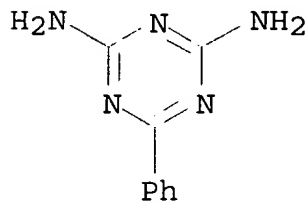
CMF C2 H6 O2



CM 6

CRN 91-76-9

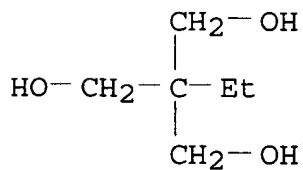
CMF C9 H9 N5



CM 7

CRN 77-99-6

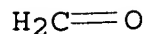
CMF C6 H14 O3



CM 8

CRN 50-00-0

CMF C H2 O



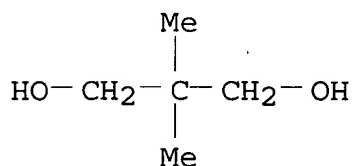
RN 147488-45-7 HCA

CN 1,3-Benzenedicarboxylic acid, polymer with 2-butyl-2-ethyl-1,3-propanediol, dimethyl 1,4-benzenedicarboxylate, 2,2-dimethyl-1,3-propanediol, 1,2-ethanediol, formaldehyde, hexahydro-1,3-isobenzofurandione, hexanedioic acid, 6-phenyl-1,3,5-triazine-2,4-diamine and 1,3,5-triazine-2,4,6-triamine (9CI) (CA INDEX NAME)

CM 1

CRN 126-30-7

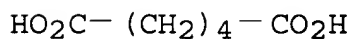
CMF C5 H12 O2



CM 2

CRN 124-04-9

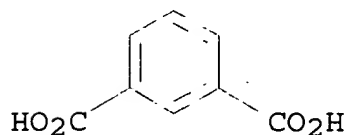
CMF C6 H10 O4



CM 3

CRN 121-91-5

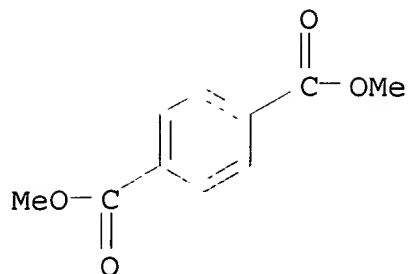
CMF C8 H6 O4



CM 4

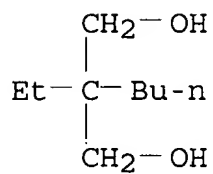
CRN 120-61-6

CMF C10 H10 O4



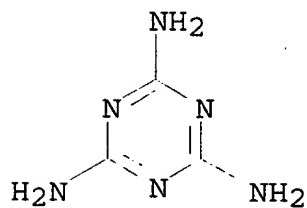
CM 5

CRN 115-84-4
 CMF C9 H20 O2



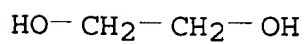
CM 6

CRN 108-78-1
 CMF C3 H6 N6



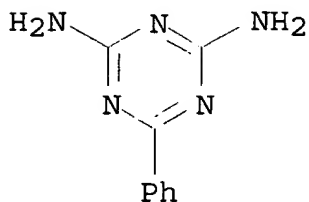
CM 7

CRN 107-21-1
 CMF C2 H6 O2



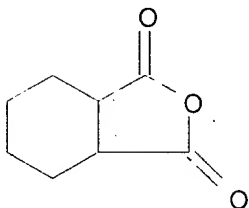
CM 8

CRN 91-76-9
CMF C9 H9 N5



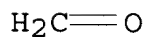
CM 9

CRN 85-42-7
CMF C8 H10 O3



CM 10

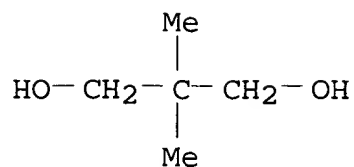
CRN 50-00-0
CMF C H2 O



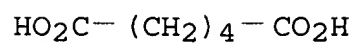
RN 147488-46-8 HCA
CN 1,3-Benzenedicarboxylic acid, polymer with 2-butyl-2-ethyl-1,3-propanediol, 1,4-cyclohexanedimethanol, dimethyl 1,4-benzenedicarboxylate, 2,2-dimethyl-1,3-propanediol, 1,2-ethanediol, formaldehyde, hexahydro-1,3-isobenzofurandione, hexanedioic acid, 6-phenyl-1,3,5-triazine-2,4-diamine and 1,3,5-triazine-2,4,6-triamine (9CI) (CA INDEX NAME)

CM 1

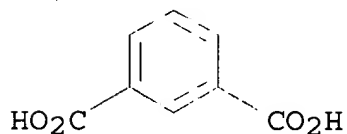
CRN 126-30-7
CMF C5 H12 O2



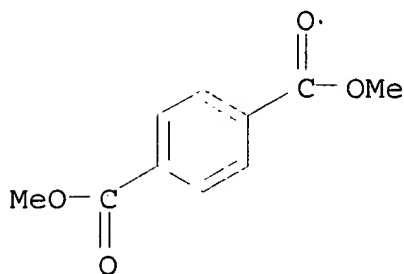
CM 2

CRN 124-04-9
CMF C6 H10 O4

CM 3

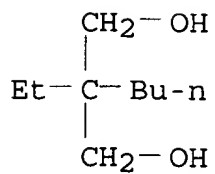
CRN 121-91-5
CMF C8 H6 O4

CM 4

CRN 120-61-6
CMF C10 H10 O4

CM 5

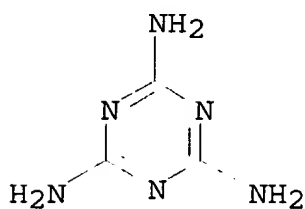
CRN 115-84-4
CMF C9 H20 O2



CM 6

CRN 108-78-1

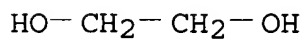
CMF C3 H6 N6



CM 7

CRN 107-21-1

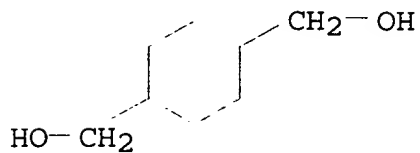
CMF C2 H6 O2



CM 8

CRN 105-08-8

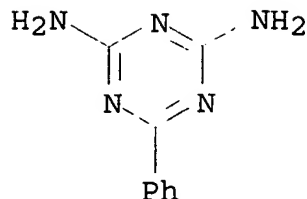
CMF C8 H16 O2



CM 9

CRN 91-76-9

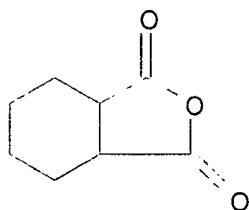
CMF C9 H9 N5



CM 10

CRN 85-42-7

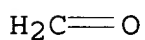
CMF C8 H10 O3



CM 11

CRN 50-00-0

CMF C H2 O



IC ICM C09D167-02
ICS C08L061-20; C08L067-02; C09D161-20
CC 42-8 (Coatings, Inks, and Related Products)
Section cross-reference(s): 55, 56
IT **Crosslinking** agents
(aminoplasts, for polyester coating on metals)
IT Aminoplasts
(**crosslinking** agents, for polyester coating on metals)
IT **Coating materials**
(polyester-aminoplast blends, flexible, with good hardness and
hiding power, for metals)
IT 147488-43-5P 147488-44-6P 147488-45-7P
147488-46-8P
(prepn. of, coatings, flexible, with good hardness and hiding
power, for metals)

L41 ANSWER 5 OF 11 HCA COPYRIGHT 2002 ACS

117:113721 Methyl-etherated amino resin compositions for coatings.
Oshikubo, Toshio; Hacha, Toshuki (Hitachi Chemical Co., Ltd.,

Japan). Jpn. Kokai Tokkyo Koho JP 04136078 A2 19920511 Heisei, 7 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1990-256622 19900926.

AB The title compns. with good hardness, solvent resistance, boiling water resistance, etc., comprise (A) Me-etherated aminoplasts contg. .ltoreq.1.5% free HCHO and .ltoreq.10% components with 1 and 2 triazine rings and prepd. by addn. reaction of melamine and/or benzoguanamine and HCHO and subsequent etherification with MeOH and (B) A-reactive curable resins. Thus, heating a mixt. of melamine 126, paraformaldehyde 225, and MeOH 256 at 60.degree. in the presence of aq. NaOH for 2 h, cooling, adding aq. HNO3, and treating at 60.degree. for 4 h gave Me-etherated melamine resin contg. 0.1% free HCHO, 6.9% components with 1 triazine ring, and 4.5% components with 2 triazine rings. Then, a steel sheet was sprayed with a compn. contg. the resin 30, Phthalkyd 450 70, and TiO2 60 parts, dried at room temp., and baked at 130.degree. to form a coating with gloss 90%, pencil hardness F, cross-cut adhesion 100/100, and good impact, solvent, water, and acid resistance.

IT 25035-72-7DP, Benzoguanamine-formaldehyde-melamine copolymer, Me etherated
(prepn. of, **crosslinking** agents, for solvent- and water-resistant coatings)

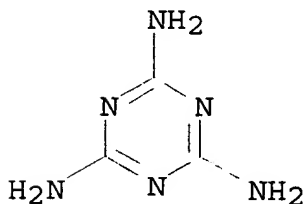
RN 25035-72-7 HCA

CN Formaldehyde, polymer with 6-phenyl-1,3,5-triazine-2,4-diamine and 1,3,5-triazine-2,4,6-triamine (9CI) (CA INDEX NAME)

CM 1

CRN 108-78-1

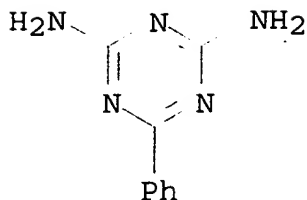
CMF C3 H6 N6



CM 2

CRN 91-76-9

CMF C9 H9 N5



CM 3

CRN 50-00-0

CMF C H2 O

H₂C=O

IC ICM C09D161-32

ICS C09D201-06

CC 42-10 (Coatings, Inks, and Related Products)

IT **Crosslinking** agents

(aminoplasts, Me-etherated, for solvent- and water-resistant coatings)

IT Aminoplasts

(benzoguanamine- and/or melamine-based, Me-etherated, **crosslinking** agents, for coatings)

IT Alkyd resins

(coatings, Phthalkyd 450, **crosslinking** agents for, Me-etherated aminoplasts as)IT **Coating materials**(solvent- and water-resistant, **crosslinking** agents for, Me-etherated aminoplasts as)

IT 9003-08-1DP, Formaldehyde-melamine copolymer, Me etherated

25035-72-7DP, Benzoguanamine-formaldehyde-melamine

copolymer, Me etherated 26160-89-4DP, Benzoguanamine-formaldehyde copolymer, Me etherated

(prepn. of, **crosslinking** agents, for solvent- and water-resistant coatings)

L41 ANSWER 6 OF 11 HCA COPYRIGHT 2002 ACS

116:31561 Thermal recording materials with overcoat layer comprising emulsion polymerized siloxanes. Nakano, Shiro; Tanaka, Seiichi; Igawa, Kiyoshi; Kawamura, Kiyoshi (Oji Paper Co., Ltd., Japan; Nippon Shokubai Kagaku Kogyo Co., Ltd.). Jpn. Kokai Tokkyo Koho JP 03147887 A2 19910624 Heisei, 9 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1989-286748 19891102.

AB The title materials comprise a synthetic paper support, a heat-sensitive layer contg. a leuco dye and a color developer, and an overcoat layer of a coating agent contg. an aq. resin dispersion, amino type hardening particles, and a **crosslinking** agent. The resin dispersion is prepd. by the emulsion polymn. of a mixt. of

org. Si monomers having hydrolyzable groups directly linked to the Si atom and polymerizable monomers having functional groups reactive with CO₂H groups in an aq. medium using, as an emulsifier, reactive surfactant RS[CHR₁CR₂(CO₂R₆)]_m[CHR₃CR₄(CO₂R₇)]_n[CH₂R₅R₈]pH [R = C₆-18 alkyl; R₁-5 = H, Me, CO₂H, CH₂CO₂H or their salts; R₆ = H, ammonium salt, amine salt, alkali metal, alkali earth metal; R₇ = a hydrocarbon group having a polymerizable unstd. group; R₈ = CN, (substituted) Ph, CO₂NH₂, carboxylic acid alkyl ester; m = 1-500; n = 0, 1-100; p = 0, 1-250]. The materials show good water resistance and antistick properties and storage stability. Thus, a polymer from acrylic acid and n-dodecylmercaptan was reacted with allyl glycidyl ether and triethylbenzylammonium chloride, and in an aq. medium contg. the resulting surfactant, a mixt. of Me methacrylate, Et acrylate, glycidyl methacrylate, and vinyltrimethoxysilane was polymd. to give a resin dispersion. A compn. contg. the dispersion, Epistar S12 (amino type hardening particle), and J 003 (acrylic acid-modified glyoxal) was coated on a paper support with a heat-sensitive layer contg. 3-dibutylamino-6-methyl-7-anilino-fluoran and Yoshinox SR [4,4'-thiobis(6-tert-butyl-3-methylphenol)] to give a thermal recording paper.

IT 137961-71-8
(emulsifying agent, for siloxane polymn., thermal-transfer recording material protective layer using)

RN 137961-71-8 HCA
CN Benzenemethanaminium, N,N,N-triethyl-, salt with 1-dodecanethiol telomer with formaldehyde, 6-phenyl-1,3,5-triazine-2,4-diamine, 2-propenoic acid, [(2-propenyloxy)methyl]oxirane and 1,3,5-triazine-2,4,6-triamine (9CI) (CA INDEX NAME)

CM 1

CRN 16652-03-2

CMF C13 H22 N

Et₃N-CH₂-Ph

CM 2

CRN 137961-70-7

CMF C12 H26 S . (C9 H9 N5 . C6 H10 O2 . C3 H6 N6 . C3 H3 O2 . C H2 O)x

CM 3

CRN 112-55-0

CMF C12 H26 S

HS-(CH₂)₁₁-Me

CM 4

CRN 138488-56-9

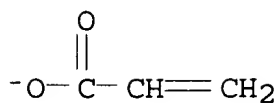
CMF (C9 H9 N5 . C6 H10 O2 . C3 H6 N6 . C3 H3 O2 . C H2 O)x

CCI PMS

CM 5

CRN 10344-93-1

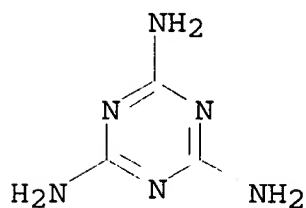
CMF C3 H3 O2



CM 6

CRN 108-78-1

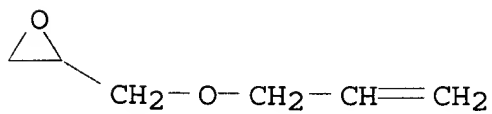
CMF C3 H6 N6



CM 7

CRN 106-92-3

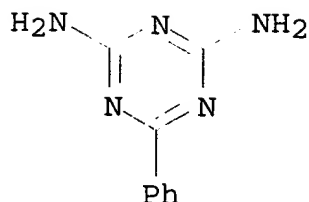
CMF C6 H10 O2



CM 8

CRN 91-76-9

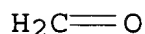
CMF C9 H9 N5



CM 9

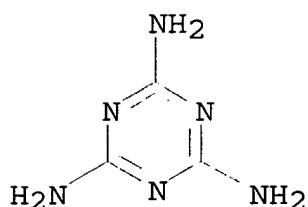
CRN 50-00-0

CMF C H2 O

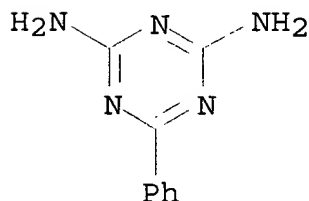


- IC ICM B41M005-26
- CC 74-12 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
- ST thermal recording material overcoat layer; emulsifier resin thermal recording material; amino hardening agent thermal recording; **crosslinking** agent thermal recording material; siloxane overcoat layer thermal recording
- IT **Coating materials**
(siloxane, emulsion polyimd., thermal-transfer recording material protective layer using)
- IT **Crosslinking** agents
(thermal-transfer recording material protective layer contg.)
- IT 137961-69-4 137961-71-8 138278-62-3
(emulsifying agent, for siloxane polymn., thermal-transfer recording material protective layer using)
- L41 ANSWER 7 OF 11 HCA COPYRIGHT 2002 ACS
- 113:8105 High-molecular-weight aminoplast-containing coatings. Oshikubo, Toshio; Hachiya, Toshiyuki (Hitachi Chemical Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 02029478 A2 19900131 Heisei, 6 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1988-178402 19880718.
- AB The thermally stable thermosetting coatings contain (A) alkyl etherated aminoplasts having .ltoreq.1.5% free HCHO, Gardner viscosity (.eta.g, nonvol. content 60%, in BuOH) .ltoreq.U, and 1 or 2 triazine-contg. mol. (Tg1, Tg2) 10-25% and prepd. by additive condensation of HCHO with amines [e.g., melamine (I), guanamine, urea, or dicyandiamide] followed by etheration with alcs. and (B) A-curable polymers. Thus, spreading a 55% soln. contg. I-benzoguanamine-formaldehyde copolymer (no.-av. mol. wt. 1600, .eta.g M, and free HCHO 0.9, Tg1 15.5, and Tg2 13.1%) and Phthalkyd 804-70 A on a panel and heating at 108.degree. for 0.5 h gave a film showing wt. loss 3.9% (after heating the film at 180.degree. for 10 min).

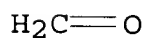
IT 25035-72-7, Benzoguanamine-formaldehyde-melamine copolymer
 (high-mol.-wt., coatings contg. alkyd resin cured with,
 heat-resistant)
 RN 25035-72-7 HCA
 CN Formaldehyde, polymer with 6-phenyl-1,3,5-triazine-2,4-diamine and
 1,3,5-triazine-2,4,6-triamine (9CI) (CA INDEX NAME)
 CM 1
 CRN 108-78-1
 CMF C3 H6 N6



CM 2
 CRN 91-76-9
 CMF C9 H9 N5



CM 3
 CRN 50-00-0
 CMF C H2 O



IC ICM C09D161-20
 ICS C09D011-08
 ICI C09D161-20, C09D201-00
 CC 42-3 (Coatings, Inks, and Related Products)
 IT Aminoplasts
 (high-mol. wt., **crosslinkers**, for alkyd resins)
 IT **Crosslinking** agents
 (high-mol.wt. aminoplasts, for alkyd coatings)

IT Coating materials

(heat-resistant, high-mol.-wt. aminoplast-contg. alkyd resins)
 IT 25035-72-7, Benzoguanamine-formaldehyde-melamine copolymer
 (high-mol.-wt., coatings contg. alkyd resin cured with,
 heat-resistant)

L41 ANSWER 8 OF 11 HCA COPYRIGHT 2002 ACS

110:77659 Manufacture of aqueous partially etherated aminoplast
 dispersions with good thinnability and storability. Masuda,
 Takeshi; Ozawa, Hiroshi (Dainippon Ink and Chemicals, Inc., Japan).
 Jpn. Kokai Tokkyo Koho JP 63170468 A2 19880714 Showa, 11 pp.
 (Japanese). CODEN: JKXXAF. APPLICATION: JP 1987-1119 19870108.

AB The title dispersions useful as **crosslinkers** for
 water-thinned alkyds and acrylic resins, forming hard coatings with
 excellent alkali and water resistance are prepd. by condensation of
 (A) .gtoreq.1 amino compd. chosen from urea, melamine,
 acetoguanamine, benzoguanamine, etc., (B) .gtoreq.1 aldehyde chosen
 from HCHO, paraformaldehyde, MeCHO, EtCHO, etc., and (C) C1-4 alc.
 in the presence of (D) hydrophilic urethane compd. and (E) compd.
 contg. OH group(s) and CO₂H group(s) at (A + B + C): D = 100:1-30;
 E/(E + C) = 0.1-30 mol%, followed by thinning with water with or
 without solubilization by neutralization with an alkali. Melamine
 126, Me(OCH₂CH₂)_nO₂CNH(CH₂)₆NHCONH₂ 10, 40:50:10 HCHO-Me₂CHOH-H₂O
 450, and iso-BuOH 219 parts were stirred at 80.degree. for 40 min,
 treated with 13.4 parts dimethylolpropionic acid, adjusted to pH 6.0
 with Et₃N, heated to 93.degree. over 30 min, heated under reflux for
 5 h, cooled to 80.degree., concd. in vacuo to 76.5% solids, and
 thinned with BuOCH₂CH₂OH to 50%-solids solns. which (100 parts) was
 adjusted to pH 8.0 with Et₃N, emulsified with 100 parts water, and
 concd. in vacuo to give a 51.5%-solids dispersion storable >3 mo
 without sedimentation. With an oil-free alkyd, this partially
 etherated aminoplast gave a 21-.mu.m baked coating with Erichsen
 value >5 mm, pencil hardness 2 H, and excellent water resistance.

IT 118945-86-1

(water-thinned, contg. urethane compds., storable)

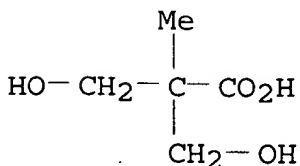
RN 118945-86-1 HCA

CN Propanoic acid, 3-hydroxy-2-(hydroxymethyl)-2-methyl-, polymer with
 formaldehyde, 6-phenyl-1,3,5-triazine-2,4-diamine and
 1,3,5-triazine-2,4,6-triamine (9CI) (CA INDEX NAME)

CM 1

CRN 4767-03-7

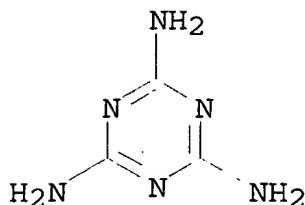
CMF C5 H10 O4



CM 2

CRN 108-78-1

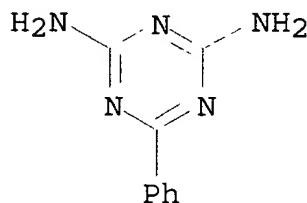
CMF C3 H6 N6



CM 3

CRN 91-76-9

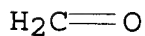
CMF C9 H9 N5



CM 4

CRN 50-00-0

CMF C H2 O



IC ICM C09D003-50

ICS C08G012-40; C08G012-42

CC 42-10 (Coatings, Inks, and Related Products)

Section cross-reference(s): 40

ST waterborne aminoplast **crosslinker** alkyd coating; urethane
alkoxylate dispersant waterborne aminoplastIT **Crosslinking** agents(dispersions of etherated aminoplasts, for acrylic or alkyd
resin)IT **Coating materials**

(water-thinned, amino resin-polyester)

IT 26794-16-1 39611-94-4 118945-84-9 **118945-86-1**

(water-thinned, contg. urethane compds., storable)

L41 ANSWER 9 OF 11 HCA COPYRIGHT 2002 ACS

102:8341 Aqueous coating materials. (Hitachi Chemical Co., Ltd., Japan).

Jpn. Kokai Tokkyo Koho JP 59147056 A2 19840823 Showa, 5 pp.

(Japanese). CODEN: JKXXAF. APPLICATION: JP 1983-20354 19830209.

AB Aq. coating materials contain 40-95 parts water-sol. or water-dispersible resins and 5-60 parts amino resin alkyl ethers prepd. from 10-50% melamine, 50-90% benzoguanamine, and HCHO and etherifying with MeOH, EtOH, or PrOH and contg. <1.5 methylol groups/triazine ring and >40% resin contg. 1 triazine ring/mol. Thus, benzoguanamine-formaldehyde-melamine copolymer methanol ether (I) [25035-72-7] (80% heating residues) 37.5 Hitaloid 7121 [93793-11-4] (an acrylic resin) 70, and Ti white 100 parts were kneaded, thinned, coated, and baked to form a coating having pencil hardness 2H and good resistance to boiling water, compared with H and poor, resp., for a coating using Melan 523 (a melamine resin Me ether) in place of I.

IT 25035-72-7

(coatings, aq., contg. acrylic resins)

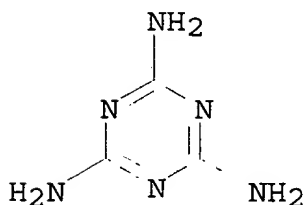
RN 25035-72-7 HCA

CN Formaldehyde, polymer with 6-phenyl-1,3,5-triazine-2,4-diamine and 1,3,5-triazine-2,4,6-triamine (9CI) (CA INDEX NAME)

CM 1

CRN 108-78-1

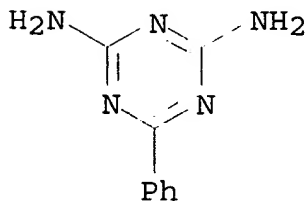
CMF C3 H6 N6



CM 2

CRN 91-76-9

CMF C9 H9 N5



CM 3

CRN 50-00-0
CMF C H2 O

H₂C=O

IC C09D003-52; C08G012-42; C08L061-20
CC 42-10 (Coatings, Inks, and Related Products)
ST acrylic melamine benzoguanamine formaldehyde coating;
crosslinking agent amino resin
IT **Coating materials**
(aq., contg. acrylic resins and amino resin alkyl ethers)
IT **Crosslinking** agents
(benzoguanamine-melamine resins alkyl ethers, for acrylic resins,
for aq. coatings)
IT **25035-72-7**
(coatings, aq., contg. acrylic resins)

L41 ANSWER 10 OF 11 HCA COPYRIGHT 2002 ACS
92:216881 Powder coating resin containing an aromatic carbonamide
condensate. Isaksen, Robert A.; Locke, Frederic J.; Smith, John L.;
Spitz, George T. (Monsanto Co., USA). U.S. US 4190714 19800226, 7
pp. Cont. of U.S. 4,133,843. (English). CODEN: USXXAM.
APPLICATION: US 1978-318292 19780317.

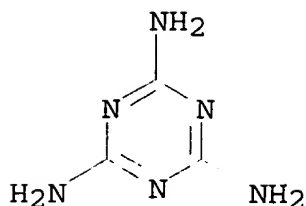
AB Compns. useful as electrostatic powder coatings comprise a synthetic
resin and a polymeric aminoplast-diol compd. as a
crosslinking agent. Thus, butylated methylolbenzoguanamine
475, hydrogenated bisphenol A 240, and citric acid 0.2 part were
heated at 120.degree. to give the **crosslinking** agent.
Isophthalic acid-neopentyl glycol-trimethylolethane copolymer
[55067-71-5] 250, **crosslinking** agent 108, TiO₂ 250, and
resin modifier 0.8 part were mixed to give a powder coating which
was electrostatically sprayed on steel panels and baked 30 min at
175.degree. to give a coating having forward impact strength 45
in.-lb. and reverse impact strength 23 in.-lb., and MeEtCO rub value
>200.

IT **25035-72-7**
(**crosslinking** agents, for powder coatings)

RN 25035-72-7 HCA
CN Formaldehyde, polymer with 6-phenyl-1,3,5-triazine-2,4-diamine and
1,3,5-triazine-2,4,6-triamine (9CI) (CA INDEX NAME)

CM 1

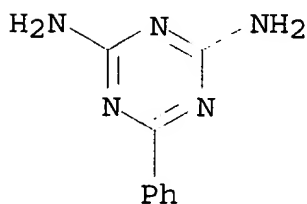
CRN 108-78-1
CMF C3 H6 N6



CM 2

CRN 91-76-9

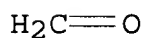
CMF C9 H9 N5



CM 3

CRN 50-00-0

CMF C H2 O



IC C08L061-32

NCL 525163000

CC 42-10 (Coatings, Inks, and Related Products)

IT **Crosslinking** agents

(aminoplasts, for powder coatings)

IT **Coating materials**(powder, aminoplast-**crosslinked** polymers)

IT 80-05-7D, hydrogenated, reaction products with aminoplasts.

25035-72-7 25067-00-9 53196-83-1 73829-29-5

73829-30-8 73829-31-9

(crosslinking agents, for powder coatings)

IT 32458-06-3 55067-71-5

(powder coatings, aminoplast **crosslinking** agents for)

L41 ANSWER 11 OF 11 HCA COPYRIGHT 2002 ACS

77:7422 Aminoplast for coating materials. Ichinomiya, Toshiho;
 Ishigaki, Masaru (Honey Chemical Industry Co., Ltd.). Japan. JP
 47001393 B4 19720114 Showa, 5 pp. (Japanese). CODEN: JAXXAD.
 APPLICATION: JP 19691104.

AB An aminoplast hardener for coatings was prepd. by methylolating benzoguanamine [91-76-9] and melamine [108-78-1] with formaldehyde [50-00-0] and methanol [67-56-1] at pH 8 at 70.deg., refluxing with oxalic acid [144-62-7] in MeOH at pH 9, and concg.

IT 25035-72-7

(crosslinking agents, for coatings)

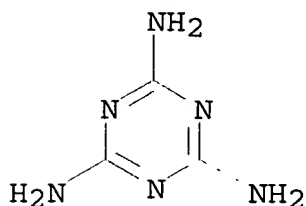
RN 25035-72-7 HCA

CN Formaldehyde, polymer with 6-phenyl-1,3,5-triazine-2,4-diamine and 1,3,5-triazine-2,4,6-triamine (9CI) (CA INDEX NAME)

CM 1

CRN 108-78-1

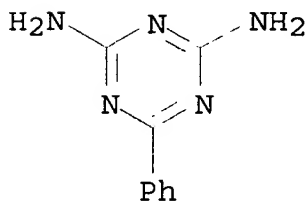
CMF C3 H6 N6



CM 2

CRN 91-76-9

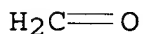
CMF C9 H9 N5



CM 3

CRN 50-00-0

CMF C H2 O



IC C08G

CC 42-4 (Coatings, Inks, and Related Products)

IT Coating materials

(crosslinking agents for, benzoquanamine-formaldehyde-melamine polymers as)

IT 25035-72-7
(crosslinking agents, for coatings)

=> d 142 1-10 cbib abs hitstr hitind

L42 ANSWER 1 OF 10 HCA COPYRIGHT 2002 ACS

132:335579 Halogen-free composite metal-clad epoxy resin laminates.
Hasegawa, Masataka (Shin-Kobe Electric Machinery Co., Ltd., Japan).
Jpn. Kokai Tokkyo Koho JP 2000136292 A2 20000516, 7 pp. (Japanese).
CODEN: JKXXAF. APPLICATION: JP 1998-312939 19981104.

AB The laminates are prep'd. by hot-pressing glass fiber **surface layers** impregnated with epoxy resins [contg. Al(OH)₃, **crosslinked** with dicyandiamide (I)], nonwoven glass fiber middle layers impregnated with epoxy resins [contg. Al(OH)₃ and condensed phosphate esters, **crosslinked** with N-contg. phenol novolaks], and metal foils. Thus, glass cloth prepregs [as **surface layers**, impregnated with a 85:15:2.1:30 mixt. of bisphenol A epoxy resin, cresol novolak epoxy resin, I, and Al(OH)₃] were hot-pressed with a nonwoven glass fiber prepreg [as middle layer, impregnated with a 50:10:40:140:10 mixt. of bisphenol A epoxy resin, bisphenol A novolak epoxy resin, PhOH-melamine-benzoguanamine-HCHO condensate, Al(OH)₃, and phosphate ester (PX 200)], and Cu foils to give a laminate showing good fire and tracking resistance.

IT 26354-09-6D, Benzoguanamine-formaldehyde-melamine-phenol copolymer, polymers with epoxy resins
(flame retardant tracking-resistant Cu-clad epoxy resin laminates)

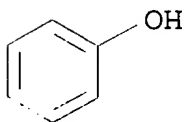
RN 26354-09-6 HCA

CN Formaldehyde, polymer with phenol, 6-phenyl-1,3,5-triazine-2,4-diamine and 1,3,5-triazine-2,4,6-triamine (9CI) (CA INDEX NAME)

CM 1

CRN 108-95-2

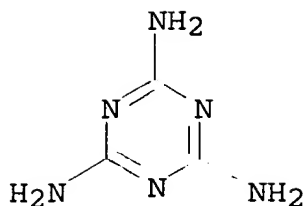
CMF C6 H6 O



CM 2

CRN 108-78-1

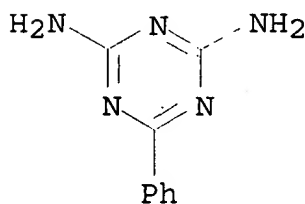
CMF C3 H6 N6



CM 3

CRN 91-76-9

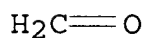
CMF C9 H9 N5



CM 4

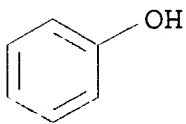
CRN 50-00-0

CMF C H2 O

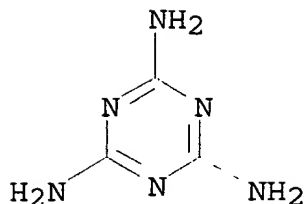


- IC ICM C08L063-00
ICS C08L063-00; B32B017-04; B32B027-04; B32B027-18; C08K003-20;
C08K003-32; C08K005-16; H05K001-03
- CC 38-3 (Plastics Fabrication and Uses)
Section cross-reference(s): 76
- ST fire resistance epoxy metal clad laminate; glass fiber impregnation
epoxy phosphate ester; novolak **crosslinking** epoxy inner
layer
- IT Epoxy resins, uses
(N-contg. novolak-**crosslinked**; flame retardant
tracking-resistant Cu-clad epoxy resin laminates)
- IT **Crosslinking** agents
Electric insulators
Fire-resistant materials
Fireproofing agents
Printed circuit boards
(flame retardant tracking-resistant Cu-clad epoxy resin
laminates)
- IT Phenolic resins, uses

- (novolak, N-contg., **crosslinking** agent; flame retardant tracking-resistant Cu-clad epoxy resin laminates)
- IT 461-58-5D, Dicyandiamide, polymers with epoxy resins 25068-38-6D, Bisphenol A-epichlorohydrin copolymer, polymers with epoxy resin and dicyandiamide or N-contg. novolak **26354-09-6D**, Benzoguanamine-formaldehyde-melamine-phenol copolymer, polymers with epoxy resins (flame retardant tracking-resistant Cu-clad epoxy resin laminates)
- L42 ANSWER 2 OF 10 HCA COPYRIGHT 2002 ACS
- 132:94516 Metal-clad epoxy resin-**based** prepreg **laminates**. Hasegawa, Masataka (Shin-Kobe Electric Machinery Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 2000025155 A2 20000125, 6 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1998-195369 19980710.
- AB The title laminates, with good tracking and heat resistance, comprise **surface layers** of glass fiber cloths impregnated with halo-free epoxy resins (e.g., bisphenol A-based epoxy resins and cresol novolak epoxy resins) contg. dicyandiamide hardener, Al(OH)₃, and melamine cyanurate, and middle layers of glass fiber nonwovens impregnated with N-contg. epoxy resins (e.g., Tetric S) contg. N-contg. phenol novolak resins (e.g., benzoguanamine-formaldehyde-melamine-phenol copolymer) as hardeners, Al(OH)₃, and melamine cyanurate.
- IT **26354-09-6**, Benzoguanamine-formaldehyde-melamine-phenol copolymer (hardeners; metal-clad epoxy resin-**based** prepreg **laminates**)
- RN 26354-09-6 HCA
- CN Formaldehyde, polymer with phenol, 6-phenyl-1,3,5-triazine-2,4-diamine and 1,3,5-triazine-2,4,6-triamine (9CI) (CA INDEX NAME)
- CM 1
- CRN 108-95-2
- CMF C6 H6 O



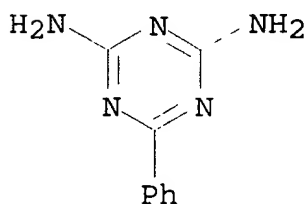
- CM 2
- CRN 108-78-1
- CMF C3 H6 N6



CM 3

CRN 91-76-9

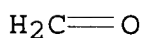
CMF C9 H9 N5



CM 4

CRN 50-00-0

CMF C H2 O



IC ICM B32B017-04

CC 38-3 (Plastics Fabrication and Uses)

Section cross-reference(s): 76

IT Reinforced plastics

(glass fiber-reinforced; metal-clad epoxy resin-based prepreg laminates)

IT **Crosslinking** agents

Heat-resistant materials

(metal-clad epoxy resin-based prepreg laminates)

IT Epoxy resins, uses

(metal-clad epoxy resin-based prepreg laminates)

IT Laminated plastics, uses

(metal-clad epoxy resin-based prepreg laminates)

IT Epoxy resins, uses

(phenolic, novolak, cresol-based; metal-clad epoxy resin-based prepreg laminates)

- IT Glass fiber fabrics
Glass fibers, uses
(prepregs; metal-clad epoxy resin-based prepreg laminates)
- IT Electric breakdown
(surface, resistance to; metal-clad epoxy resin-based prepreg laminates)
- IT 28825-96-9, Tepic S
(Tepic S; metal-clad epoxy resin-based prepreg laminates)
- IT 7440-50-8, Copper, uses
(foils; metal-clad epoxy resin-based prepreg laminates)
- IT 461-58-5, Dicyandiamide 26354-09-6, Benzoguanamine-formaldehyde-melamine-phenol copolymer
(hardeners; metal-clad epoxy resin-based prepreg laminates)
- IT 21645-51-2, Aluminum hydroxide (Al(OH)₃), uses 37640-57-6, Melamine cyanurate
(metal-clad epoxy resin-based prepreg laminates)

L42 ANSWER 3 OF 10 HCA COPYRIGHT 2002 ACS

132:12978 Composite metal-clad laminates with excellent fire and tracking resistance. Hasegawa, Masataka (Shin-Kobe Electric Machinery Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 11333974 A2 19991207 Heisei, 7 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1998-142490 19980525.

AB The laminates consist of epoxy resin-impregnated glass fiber fabrics as the **surface layers**, epoxy resin-impregnated glass fiber nonwoven fabrics as the center layers, and metal foil(s) placed on at least one surface and hot-press-molded, where the epoxy resins of the **surface layers** are non-halogen type ones and cured with dicyandiamide (I) and contain Al(OH)₃, the epoxy resins of the center layers are non-halogen type ones and cured with N-contg. novolaks and contain Al(OH)₃, both of the **surface** and center **layers** contain melamine cyanurate (II), and only the center layers contain silicone powders. N-contg. novolaks may be used as the **crosslinking** agents of the **surface layers** instead of I. Thus, a varnish comprising bisphenol A epoxy resin (III) 85, cresol novolak epoxy resin 15, I 2.1, Al(OH)₃ 30, II (MC 1) 30, and 2-ethyl-4-methylimidazole (IV) 0.1 part was impregnated into glass cloths to give prepregs for **surface layers**, sep., another varnish of III 50, bisphenol A novolak epoxy resin 10, PhOH-melamine-benzoguanamine-HCHO copolymer (23% N) 40, Al(OH)₃ 140, II 30, silicone powders (DC 4-7051) 5, talc 3, and IV 0.1 part was impregnated into glass nonwoven fabrics to give another prepregs for center layers. Some of the latter prepregs were piled, sandwiched with the surface prepregs, further sandwiched with Cu foils, and hot-pressed to give a composite Cu-clad laminate showing good fire and tracking resistance.

IT 26354-09-6DP, Benzoguanamine-formaldehyde-melamine-phenol
copolymer, polymers with epoxy resins
(halogen-free epoxy resin prepreg-metal clad laminates with good
fire and tracking resistance)

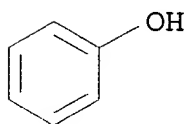
RN 26354-09-6 HCA

CN Formaldehyde, polymer with phenol, 6-phenyl-1,3,5-triazine-2,4-
diamine and 1,3,5-triazine-2,4,6-triamine (9CI) (CA INDEX NAME)

CM 1

CRN 108-95-2

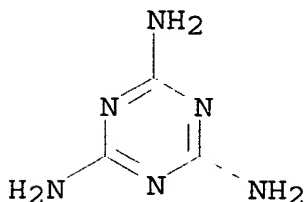
CMF C6 H6 O



CM 2

CRN 108-78-1

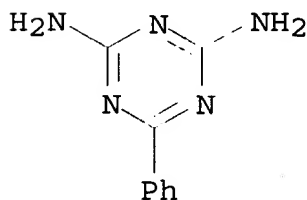
CMF C3 H6 N6



CM 3

CRN 91-76-9

CMF C9 H9 N5



CM 4

CRN 50-00-0

CMF C H2 O

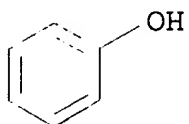
 $\text{H}_2\text{C}=\text{O}$

- IC ICM B32B015-08
ICS B32B017-04; H05K001-03; C08J005-24
- CC 38-3 (Plastics Fabrication and Uses)
Section cross-reference(s): 76
- IT Epoxy resins, uses
(dicyandiamide-**crosslinked**; halogen-free epoxy resin prepreg-metal clad laminates with good fire and tracking resistance)
- IT 461-58-5DP, Dicyandiamide, polymers with epoxy resins 9016-83-5DP, Cresol-formaldehyde copolymer, glycidyl ethers, polymers with bisphenol A epoxy resins and dicyandiamide 25068-38-6DP, Bisphenol A epoxy resin, reaction products with novolak epoxy resins and dicyandiamide or phenolic aminoplasts 26354-09-6DP, Benzoguanamine-formaldehyde-melamine-phenol copolymer, polymers with epoxy resins
(halogen-free epoxy resin prepreg-metal clad laminates with good fire and tracking resistance)
- L42 ANSWER 4 OF 10 HCA COPYRIGHT 2002 ACS
- 131:272883 Halogen-free composite metal-clad laminates with excellent fire and tracking resistance. Hasegawa, Masataka; Noda, Masayuki (Shin-Kobe Electric Machinery Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 11277675 A2 19991012 Heisei, 7 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1998-83047 19980330.
- AB The laminates consist of epoxy resin-impregnated glass cloths as **surface** and core **layers** and metal foils being laminated and hot-pressed on the layers, where the epoxy resins of the **surface layers** are halogen-free epoxy resins contg. dicyandiamide (I) and $\text{Al}(\text{OH})_3$, the epoxy resins of the core layers are halogen-free epoxy resins contg. N-contg. novolaks and $\text{Al}(\text{OH})_3$, and at least one resins contain melamine cyanurate (II). Thus, core prepreps contg. bisphenol A epoxy resin (III) 50, bisphenol A novolak epoxy resin 10, phenol-melamine-benzoguanamine-HCHO condensate 40, $\text{Al}(\text{OH})_3$ 140, II 10, talc 13, and 2-ethyl-4-methylimidazole (IV) 0.1 part were sandwiched with surface prepreps contg. III 85, cresol novolak epoxy resin 15, I 2.1, $\text{Al}(\text{OH})_3$ 30, and IV 0.1 part, further sandwiched with Cu foils, and hot-pressed to give a Cu-clad laminate showing good fire and tracking resistance.
- IT 26354-09-6, Benzoguanamine-formaldehyde-melamine-phenol copolymer
(**crosslinking** agent; for epoxy resins; halogen-free composite metal-clad laminates with good fire and tracking resistance)
- RN 26354-09-6 HCA
- CN Formaldehyde, polymer with phenol, 6-phenyl-1,3,5-triazine-2,4-diamine and 1,3,5-triazine-2,4,6-triamine (9CI) (CA INDEX NAME)

CM 1

CRN 108-95-2

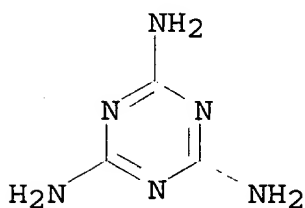
CMF C6 H6 O



CM 2

CRN 108-78-1

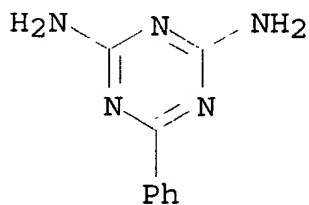
CMF C3 H6 N6



CM 3

CRN 91-76-9

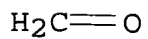
CMF C9 H9 N5



CM 4

CRN 50-00-0

CMF C H2 O



IC ICM B32B015-08
ICS B32B017-04; H05K001-03; C08J005-24

- CC 38-3 (Plastics Fabrication and Uses)
Section cross-reference(s): 76
- IT Phenolic resins, uses
(aminoplast-, **crosslinking** agent, for epoxy resins;
halogen-free composite metal-clad laminates with good fire and
tracking resistance)
- IT **Crosslinking** agents
(nitrogen-contg. novolaks; halogen-free composite metal-clad
laminates with good fire and tracking resistance)
- IT Epoxy resins, uses
(phenolic resin- or dicyandiamide-**crosslinked**,
halogen-free composite metal-clad laminates with good fire and
tracking resistance)
- IT Aminoplasts
(phenolic, **crosslinking** agent, for epoxy resins;
halogen-free composite metal-clad laminates with good fire and
tracking resistance)
- IT 461-58-5, Dicyandiamide 26354-09-6, Benzoguanamine-
formaldehyde-melamine-phenol copolymer
(**crosslinking** agent, for epoxy resins; halogen-free
composite metal-clad laminates with good fire and tracking
resistance)
- IT 25068-38-6, Bisphenol A epoxy resin
(phenolic resin- or dicyandiamide-**crosslinked**,
halogen-free composite metal-clad laminates with good fire and
tracking resistance)
- L42 ANSWER 5 OF 10 HCA COPYRIGHT 2002 ACS
- 131:74588 Metal foil-clad composite laminated boards with good fire,
tracking, and moisture resistance. Hasegawa, Masataka; Noda,
Masayuki (Shin-Kobe Electric Machinery Co., Ltd., Japan). Jpn.
Kokai Tokkyo Koho JP 11179841 A2 19990706 Heisei, 5 pp. (Japanese).
CODEN: JKXXAF. APPLICATION: JP 1997-354457 19971224.
- AB The boards, useful for printed circuit boards, are obtained by hot
pressing (a) **surface layers** consisting of glass
fiber fabrics impregnated with halogen-free epoxy resins contg. N-
and/or P-contg. phenolic novolak resin hardeners and Al(OH)₃ (I),
(b) core layers consisting of glass fiber nonwoven fabrics
impregnated with halogen-contg. epoxy resins contg. phenolic novolak
resin hardeners and I, and (c) metal foils. Thus, a glass fiber
nonwoven fabric was impregnated with brominated bisphenol A epoxy
resin, bisphenol A novolak epoxy resin, phenolic novolak resin,
2-ethyl-4-methylimidazole (II), 60 phr I, and 40 phr talc to give a
core layer prepreg, some sheets of which were hot-pressed with 2
surface prepreps comprising glass fiber fabric impregnated with
bisphenol A epoxy resin 70, cresol novolak epoxy resin 10,
phenol-melamine-benzoguanamine-HCHO condensate 20, I 30, and II 0.1
part and 2 Cu foils to give a composite Cu-clad laminate showing
tracking resistance (IEC method) 400 V, fire resistance (UL-94) V-1,
and water absorption (JIS C-6481) 0.07%.
- IT 26354-09-6DP, Benzoguanamine-formaldehyde-melamine-phenol
copolymer, polymers with bisphenol A epoxy resin and cresol novolak

epoxy resin

(metal foil-clad composite laminated boards with good fire,
tracking, and moisture resistance)

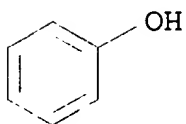
RN 26354-09-6 HCA

CN Formaldehyde, polymer with phenol, 6-phenyl-1,3,5-triazine-2,4-
diamine and 1,3,5-triazine-2,4,6-triamine (9CI) (CA INDEX NAME)

CM 1

CRN 108-95-2

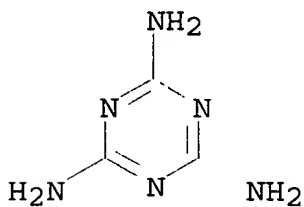
CMF C6 H6 O



CM 2

CRN 108-78-1

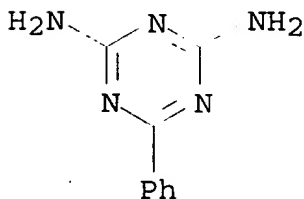
CMF C3 H6 N6



CM 3

CRN 91-76-9

CMF C9 H9 N5



CM 4

CRN 50-00-0

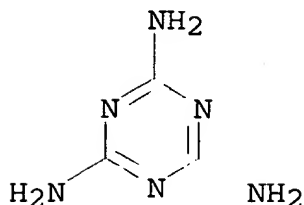
CMF C H2 O

H₂C=O

- IC ICM B32B015-08
ICS B32B017-04; C08K003-22; C08L063-00; H05K001-03; C08G059-62;
C08J005-24
- CC 38-3 (Plastics Fabrication and Uses)
Section cross-reference(s): 76
- IT Epoxy resins, uses
(brominated, **crosslinked** with novolak; metal foil-clad
composite laminated boards with good fire, tracking, and moisture
resistance)
- IT **Crosslinking** agents
(novolaks; metal foil-clad composite laminated boards with good
fire, tracking, and moisture resistance)
- IT 25068-38-6DP, Bisphenol A epoxy resin, polymers with cresol novolak
epoxy resin and N-contg. novolak **26354-09-6DP**,
Benzoguanamine-formaldehyde-melamine-phenol copolymer, polymers with
bisphenol A epoxy resin and cresol novolak epoxy resin
(metal foil-clad composite laminated boards with good fire,
tracking, and moisture resistance)
- L42 ANSWER 6 OF 10 HCA COPYRIGHT 2002 ACS
- 127:191748 Biaxially oriented polystyrene-**based** resin
sheets. Iguchi, Takehiko (Daicel Chemical Industries, Ltd.,
Japan). Jpn. Kokai Tokkyo Koho JP 09216957 A2 19970819 Heisei, 4
pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1996-22641
19960208.
- AB The biaxially oriented **sheets** comprise polystyrene-
based resin compns. contg. 1-10% styrene-grafted diene
rubbers (av. particle sizes 1-5 .mu.m, swelling degree 9-15) and
100-1000 ppm **crosslinked** org. particles (av. particle
sizes 0.5-10 .mu.m). Thus, E 183 (polystyrene) was mixed with 300
ppm Epostar M 30 (**crosslinked** org. particles; av. particle
size 3 .mu.m) and 3.0% S 61 (styrene-grafted diene rubber; av.
particle size 1.5 .mu.m, swelling degree 12) and the compn. was
extrusion molded and biaxially stretched 2.5 times to give a 180
.mu.m-thick sheet. Silicone oil was spread on the **surfaces**
of the **sheet** at 40 mg/m² to give a sheet showing good oil
resistance. The sheet was pressure formed to give containers, which
were piled up to show good impact strength and releasability without
blocking.
- IT **25035-72-7**, Epostar M 30
(biaxially oriented polystyrene-**based sheets**
contg. **crosslinked** org. particles and styrene-grafted
diene rubbers)
- RN **25035-72-7** HCA
- CN Formaldehyde, polymer with 6-phenyl-1,3,5-triazine-2,4-diamine and
1,3,5-triazine-2,4,6-triamine (9CI) (CA INDEX NAME)

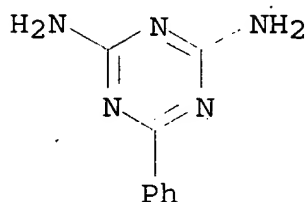
CM 1

CRN 108-78-1
CMF C3 H6 N6



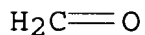
CM 2

CRN 91-76-9
CMF C9 H9 N5



CM 3

CRN 50-00-0
CMF C H2 O



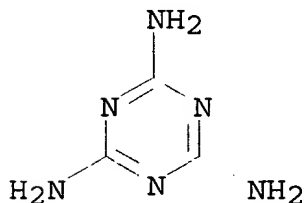
- IC ICM C08J005-18
ICS B29C055-14; C08L025-08; B29K025-00; B29L007-00
- CC 38-3 (Plastics Fabrication and Uses)
Section cross-reference(s): 39
- ST polystyrene biaxially oriented sheet diene rubber; styrene diene graft rubber polystyrene sheet; **crosslinked** org particle polystyrene oriented sheet
- IT Impact-resistant materials
Oil-resistant materials
(biaxially oriented polystyrene-based sheets
contg. **crosslinked** org. particles and styrene-grafted diene rubbers)
- IT Aminoplasts
(**crosslinked**; biaxially oriented polystyrene-based sheets contg. **crosslinked** org. particles and styrene-grafted diene rubbers)

- IT Synthetic rubber, uses
(diene-styrene, graft; biaxially oriented polystyrene-
based sheets contg. **crosslinked** org.
particles and styrene-grafted diene rubbers)
- IT 25035-72-7, Epostar M 30
(biaxially oriented polystyrene-**based sheets**
contg. **crosslinked** org. particles and styrene-grafted
diene rubbers)
- IT 9003-53-6, E 183
(biaxially oriented polystyrene-**based sheets**
contg. **crosslinked** org. particles and styrene-grafted
diene rubbers)
- L42 ANSWER 7 OF 10 HCA COPYRIGHT 2002 ACS
- 125:249866 Electric conductive particles for anisotropic electric
conductive adhesives and anisotropic electric conductive adhesives
prepped from the same. Kumakura, Hiroyuki; Ando, Takashi; Yamada,
Yukio; Suga, Yasuhiro (Sony Chemicals, Japan). Jpn. Kokai Tokkyo
Koho JP 08193186 A2 19960730 Heisei, 7 pp. (Japanese). CODEN:
JKXXAF. APPLICATION: JP 1995-21355 19950113.
- AB The particles are comprise inner cores, outside shells which are
softer than the inner cores, and elec. conductive **surface**
layers. Thus, anisotropic elec. conductive adhesive was
prepd. from a mixt. of YP 50 40, EP 828 30, and HX 3941 HP (latent
curing agent) 30% in toluene soln. (solid content 70%) contg. 5
parts core-shell particles from Epostar GHP (av. diam. 4.0 .mu.m;
core; mainly benzoguanamine and melamine) and Micropearl SP 20525
(shell, thickness 0.5 .mu.m; polymer, mainly from divinylbenzene).
- IT 25035-72-7, Epostar GHP
(core-shell particles from; elec. conductive particles for
anisotropic elec. conductive adhesives and anisotropic elec.
conductive adhesives prepped from the same)
- RN 25035-72-7 HCA
- CN Formaldehyde, polymer with 6-phenyl-1,3,5-triazine-2,4-diamine and
1,3,5-triazine-2,4,6-triamine (9CI) (CA INDEX NAME)

CM 1

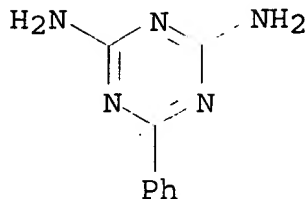
CRN 108-78-1

CMF C3 H6 N6



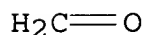
CM 2

CRN 91-76-9
CMF C9 H9 N5



CM 3

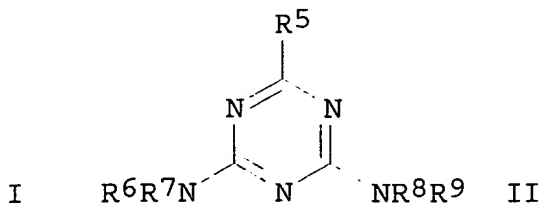
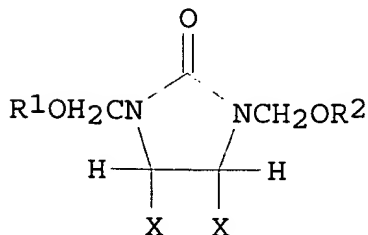
CRN 50-00-0
CMF C H2 O



IC ICM C09J011-08
ICS C09J009-02
CC 38-3 (Plastics Fabrication and Uses)
IT 9003-53-6D, Polystyrene, **crosslinked** 25035-72-7,
Epostar GHP 139465-62-6, Micropearl SP 210 182372-04-9,
Micropearl SP 20525
(core-shell particles from; elec. conductive particles for
anisotropic elec. conductive adhesives and anisotropic elec.
conductive adhesives preped from the same)

L42 ANSWER 8 OF 10 HCA COPYRIGHT 2002 ACS
124:131563 Ink-jet recording receptor and image-forming method using it.
Kashiwazaki, Akio; Morya, Kenichi; Sakaki, Mamoru; Suzuki, Eiichi;
Katayama, Masato (Canon Kk, Japan). Jpn. Kokai Tokkyo Koho JP
07223360 A2 19950822 Heisei, 9 pp. (Japanese). CODEN: JKXXAF.
APPLICATION: JP 1994-17359 19940214.

GI



AB The receptor comprises a **substrate coated** with an ink-receiving layer contg. I (R1-2 = H, C1-4 alkyl; X = H, OH), R3OH2CHNCONHCH2OR4 (R3-4 = H, C1-4 alkyl), II (R5 = H, C1-3 alkyl, Ph; .gtoreq.2 of R6-9 = CH2OX, other is H; X = H, C1-4 alkyl), methyl-modified urea-melamine condensate or methylol-modified benzoguanamine-melamine condensate, or homopolymer of CH2CR10(CONHCH2OR11) (III; R10 = H, Me; R11 = H, C1-5 alkyl), copolymer of III with vinyl monomer, or self-**crosslinking** resin emulsion. Image-formed on the receptor by ink-jet recording method, then the ink receiving layer is cured to form images. The receptor shows good ink receptibility, and images show good water resistance.

IT 25035-72-7

(Delamine MT-30-S; ink-jet recording receptor using curable resin)

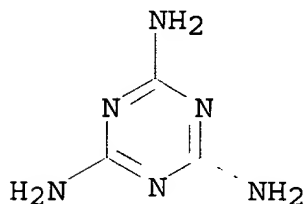
RN 25035-72-7 HCA

CN Formaldehyde, polymer with 6-phenyl-1,3,5-triazine-2,4-diamine and 1,3,5-triazine-2,4,6-triamine (9CI) (CA INDEX NAME)

CM 1

CRN 108-78-1

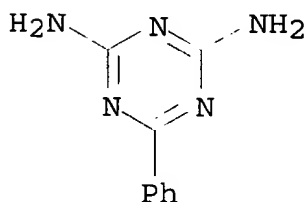
CMF C3 H6 N6



CM 2

CRN 91-76-9

CMF C9 H9 N5



CM 3

CRN 50-00-0

CMF C H2 O

 $\text{H}_2\text{C}=\text{O}$

IC ICM B41M005-00

CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

IT 25035-72-7

(Delamine MT-30-S; ink-jet recording receptor using curable resin)

L42 ANSWER 9 OF 10 HCA COPYRIGHT 2002 ACS

123:11334 Light-scattering plastic films as back illumination panels. Kiryu, Naohiko; Suzuki, Yasuyuki; Yoshino, Takeshi (Somar Corp, Japan). Jpn. Kokai Tokkyo Koho JP 07013002 A2 19950117 Heisei, 5 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1993-176208 19930623.

AB The title films are prep'd. by **coating** the **surface** of transparent plastic films with formaldehyde polymer spherical particles with av. particle diam. $\leq 10 \mu\text{m}$ and subsequently coating the back of the films with polyolefin spherical particles with av. particle diam. $\leq 30 \mu\text{m}$. PET film was **coated** on the **surface** with a dispersion contg. 8.0 parts benzoguanamine-formaldehyde-melamine copolymer particles with av. particle diam. $3 \mu\text{m}$ and 23 parts self-**crosslinkable** acrylic polymer emulsion, dried, and coated on the back side with a dispersion contg. 35.6 parts Chemipearl W-800 (low-mol.-wt. polyolefin) and 55.2 parts self-**crosslinkable** acrylic polymer emulsion to give a light-scattering film.

IT 25035-72-7, Benzoguanamine-formaldehyde-melamine copolymer (particulate, coating; on light-scattering plastic films as back illumination panels)

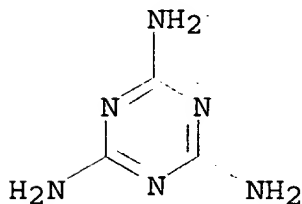
RN 25035-72-7 HCA

CN Formaldehyde, polymer with 6-phenyl-1,3,5-triazine-2,4-diamine and 1,3,5-triazine-2,4,6-triamine (9CI) (CA INDEX NAME)

CM 1

CRN 108-78-1

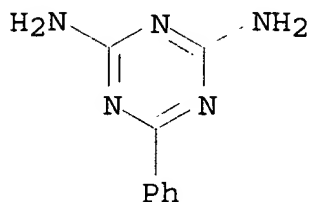
CMF C3 H6 N6



CM 2

CRN 91-76-9

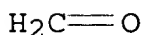
CMF C9 H9 N5



CM 3

CRN 50-00-0

CMF C H2 O



IC ICM G02B005-02

ICS B32B027-14; G02F001-1335; G09F009-00

CC 38-3 (Plastics Fabrication and Uses)

IT 9003-08-1, Formaldehyde-melamine copolymer 25035-72-7,
 Benzoguanamine-formaldehyde-melamine copolymer 26160-89-4,
 Benzoguanamine-formaldehyde copolymer 163795-76-4, Chemipearl W
 800

(particulate, coating; on light-scattering plastic films as back
 illumination panels)

L42 ANSWER 10 OF 10 HCA COPYRIGHT 2002 ACS

121:302615 Manufacture of nubuck synthetic leather with good dry
 cleaning resistance. Oosawa, Katsumi (Achilles Corp, Japan). Jpn.
 Kokai Tokkyo Koho JP 06158556 A2 19940607 Heisei, 7 pp. (Japanese).
 CODEN: JKXXAF. APPLICATION: JP 1992-328567 19921113.

AB The title process comprises coating on an elastomer-impregnated
 fabric base with a polyurethane soln. contg. powd.
crosslinked synthetic resin with spherical diam. .ltoreq.10
 .mu.m, embossing the surface to form an uneven pattern, and
 subjecting to a napping treatment. Forming a brown
 polyester-polyurethane porous film over a polyamide nonwoven fabric
 by wet method, napping the surface with a 180-mesh sandpaper,
 coating with a polyurethane-DMF soln. contg. urea-formaldehyde
 copolymer spheres with diam 5 .mu.m, roll embossing the
coated surface, puffing with sandpaper, and
 rubbing in a tumbler gave a nubuck synthetic leather, which retained
 slimy feel after dry cleaning.

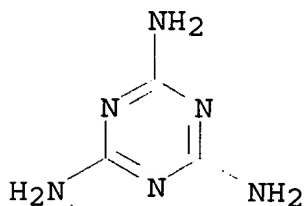
IT 25035-72-7, Benzoguanamine-formaldehyde-melamine copolymer
 (spherical filler; Manuf. of nubuck synthetic leather with good
 dry cleaning resistance)

RN 25035-72-7 HCA
 CN Formaldehyde, polymer with 6-phenyl-1,3,5-triazine-2,4-diamine and
 1,3,5-triazine-2,4,6-triamine (9CI) (CA INDEX NAME)

CM 1

CRN 108-78-1

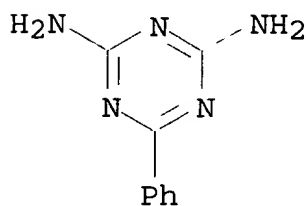
CMF C3 H6 N6



CM 2

CRN 91-76-9

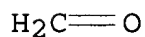
CMF C9 H9 N5



CM 3

CRN 50-00-0

CMF C H2 O



IC ICM D06N003-14
 CC 38-3 (Plastics Fabrication and Uses)
 IT 7631-86-9, Silica, uses 9003-08-1, Formaldehyde-melamine copolymer
 9011-05-6, Formaldehyde-urea copolymer 25035-72-7,
 Benzoguanamine-formaldehyde-melamine copolymer 26160-89-4,
 Benzoguanamine-formaldehyde copolymer
 (spherical filler; Manuf. of nubuck synthetic leather with good
 dry cleaning resistance)

=> d 143 1-14 ti

- L43 ANSWER 1 OF 14 HCA COPYRIGHT 2002 ACS
TI Water-soluble acrylic polymers and scratch-resistant aqueous coating compositions using them
- L43 ANSWER 2 OF 14 HCA COPYRIGHT 2002 ACS
TI Polyester-based liquid coating compositions and coated substrates made therewith
- L43 ANSWER 3 OF 14 HCA COPYRIGHT 2002 ACS
TI Polyester films having coatings containing crosslinked polymer particles and inorganic granules
- L43 ANSWER 4 OF 14 HCA COPYRIGHT 2002 ACS
TI Organic-inorganic coating composition comprising polymer-modified epoxy resin and silica-based material for coating metal surface
- L43 ANSWER 5 OF 14 HCA COPYRIGHT 2002 ACS
TI Polyesters, coating compositions based on them, and formation of coating films for cans
- L43 ANSWER 6 OF 14 HCA COPYRIGHT 2002 ACS
TI Liquid thermoset sealers and sealing process for molded plastics
- L43 ANSWER 7 OF 14 HCA COPYRIGHT 2002 ACS
TI Lubricating compositions of vinyl polymers containing amino resins and siloxanes and coatings on can exterior
- L43 ANSWER 8 OF 14 HCA COPYRIGHT 2002 ACS
TI Polycarbonate-polyurethane-siloxane-primed release films
- L43 ANSWER 9 OF 14 HCA COPYRIGHT 2002 ACS
TI Nonstaining coatings for microwave oven cookwares
- L43 ANSWER 10 OF 14 HCA COPYRIGHT 2002 ACS
TI Photosensitive coating materials
- L43 ANSWER 11 OF 14 HCA COPYRIGHT 2002 ACS
TI Water-soluble amine resins which are Mannich bases
- L43 ANSWER 12 OF 14 HCA COPYRIGHT 2002 ACS
TI Electrocoating composition with polyhydroxyamine and polybutadiene
- L43 ANSWER 13 OF 14 HCA COPYRIGHT 2002 ACS
TI Thermoreactive powdered coating compositions
- L43 ANSWER 14 OF 14 HCA COPYRIGHT 2002 ACS
TI Coating media hardenable by electron irradiation

=> d 143 2,5,6,9,10,12,14 cbib abs hitstr hitind

L43 ANSWER 2 OF 14 HCA COPYRIGHT 2002 ACS

134:341686 Polyester-based liquid coating

compositions and coated substrates made

therewith. Millero, Edward R.; Wilt, Truman F.; Montague, Robert A.

(PPG Industries Ohio, Inc., USA). PCT Int. Appl. WO 2001032790 A1

20010510, 43 pp. DESIGNATED STATES: W: AE, AG, AL, AM, AT, AU, AZ,

BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE,

ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP,

KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ,

NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ,

UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM; RW:

AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB,

GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG. (English).

CODEN: PIXXD2. APPLICATION: WO 2000-US26517 20000927. PRIORITY: US

1999-431788 19991102.

AB A liq. coating compn. comprises a film forming system comprising (a)

.gtoreq.60% of a polymer component, (b) .gtoreq.5% of a

crosslinker component, and (c) .gtoreq.0.1% of a catalyst

component. The polymer component comprises at least 90% of a

polyester component, and the polyester component comprises at least

90% of a cyclolinear polyester compd. wherein at least 90% of its

constituent monomers are cyclic, at least one of the constituent

monomers being a cyclic diacid or acid anhydride component

comprising at least 20% of the polyester component, the cyclic

diacid or acid anhydride selected from the group consisting of

phthalic acid and phthalic anhydride. The **crosslinker**

component comprises at least one curing agent selected from the

group consisting of: a melamine-formaldehyde resin,

benzoguanamine-formaldehyde resins, isocyanurates from isophorone

diisocyanate, isocyanurates from 1,6 hexamethylene diisocyanate and

the biuret from 1,6-hexamethylene diisocyanate. The catalyst

component comprises at least one compd. selected from the group

consisting of dibutyltin dilaurate, acetyl acetate, quaternary

ammonium or phosphonium compds., sulfonic acids, mineral acids,

carboxylic acids, magnesium bromide, aluminum nitrate, and zinc

nitrate. When in their uncured state, the coating compns. of the

present invention are extremely stable. On the other hand, when in

their cured state, the coating compns. of the present invention

produce flexible, durable films which are stain and scratch

resistant.

IT 26160-89-4, Benzoguanamine-formaldehyde resin

(polyester-based liq. coating compns. and

coated substrates made therewith)

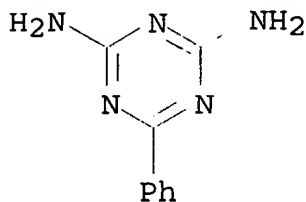
RN 26160-89-4 HCA

CN Formaldehyde, polymer with 6-phenyl-1,3,5-triazine-2,4-diamine (9CI)

(CA INDEX NAME)

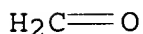
CM 1

CRN 91-76-9
CMF C9 H9 N5



CM 2

CRN 50-00-0
CMF C H2 O



- IC ICM C09D167-00
ICS C08G063-199
- CC 42-10 (Coatings, Inks, and Related Products)
- IT Acids, uses
(inorg.; polyester-based liq. coating compns. and coated substrates made therewith)
- IT Coating materials
(polyester-based liq. coating compns. and coated substrates made therewith)
- IT Carboxylic acids, uses
Phosphonium compounds
Quaternary ammonium compounds, uses
Sulfonic acids, uses
(polyester-based liq. coating compns. and coated substrates made therewith)
- IT Aminoplasts
Polyesters, uses
(polyester-based liq. coating compns. and coated substrates made therewith)
- IT 77-58-7, Dibutyltin dilaurate 7779-88-6, Zinc nitrate 7789-48-2,
Magnesium bromide 13473-90-0, Aluminum nitrate 17272-66-1,
Acetyl acetate, uses
(polyester-based liq. coating compns. and coated substrates made therewith)
- IT 64615-90-3P 80215-48-1P, Cyclohexanedimethanol-Isophthalic
Acid-phthalic anhydride copolymer 88993-22-0P,
Cyclohexanedimethanol-Hexahydrophthalic Anhydride copolymer
89072-18-4P 180150-77-0P, Dodecanedioic acid-isophthalic
acid-2-methylpropane diol-neopentyl glycol-phthalic
anhydride-propylene glycol-trimethylolpropane copolymer
338741-73-4P, Cyclohexanedimethanol-Phthalic Anhydride copolymer
(polyester-based liq. coating compns. and

coated substrates made therewith)

IT 9003-08-1, CYMEL 303 25068-38-6, EPON 1001 26160-89-4,
Benzoguanamine-formaldehyde resin 66810-89-7, CYMEL 1123
(polyester-based liq. coating compns. and
coated substrates made therewith)

L43 ANSWER 5 OF 14 HCA COPYRIGHT 2002 ACS
129:176980 Polyesters, coating compositions based on
them, and formation of coating films for cans. Azumano, Tetsuji;
Ito, Atsushi; Kyota, Masashi (Arakawa Chemical Industries, Ltd.,
Japan). Jpn. Kokai Tokkyo Koho JP 10212344 A2 19980811 Heisei, 6
pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1997-29644
19970128.

AB The polyesters consist of (A) polybasic acids contg. 50-80 mol%
arom. dicarboxylic acids and (B) polyols contg. 30-70 mol%
HOCH2CR1R2CR3HOH (R1-R3 = H, C1-4 alkyl; amt. of C of R1-R3 .gtoreq.
3) and 0.1-10 mol% hydrogenated dimer diols. The coating compns.
comprise the polyesters and amino resins and are applied on metal
plates for cans, which are precoated with inks directly or via
undercoating layer, before curing of the inks, and cured by heating.
Thus, di-Me terephthalate 168, ethylene glycol 49,
2-butyl-2-ethyl-1,3-propanediol 215.9, Bepol HP-1000 (hydrogenated
dimer diol) 63, isophthalic acid 72, hexahydrophthalic anhydride 53,
and sebacic acid 17 parts were polymd. in the presence of Ti(Obu)4
and dissolved in Solvesso 150 and ethylene glycol monobutyl ether to
give a polyester soln., which (70 parts) was blended with 15 parts
Delamine T-100S (amino resin), another 15 parts amino resin,
Solvesso 150, butyl Cellosolve, and p-MeC6H4SO3H to give a clear
coating. A tinplate was coated with a polyester white coating,
dried, printed with an ink contg. drying oil alkyd resin-
based vehicle, coated with the clear coating
without curing the ink, and baking to give a test piece without ink
bleeding, embossment, and peeling in processing the plate.

IT 211561-52-3P 211561-53-4P
(polyesters for can coatings with good processability and
wet-on-wet coating process)

RN 211561-52-3 HCA
CN 1,3-Benzenedicarboxylic acid, polymer with 2-butyl-2-ethyl-1,3-
propanediol, decanedioic acid, dimethyl 1,4-benzenedicarboxylate,
1,2-ethanediol, formaldehyde, hexahydro-1,3-isobenzofurandione,
Pespel HP 1000 and 6-phenyl-1,3,5-triazine-2,4-diamine (9CI) (CA
INDEX NAME)

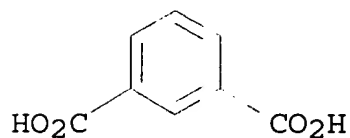
CM 1

CRN 186673-41-6
CMF Unspecified
CCI MAN

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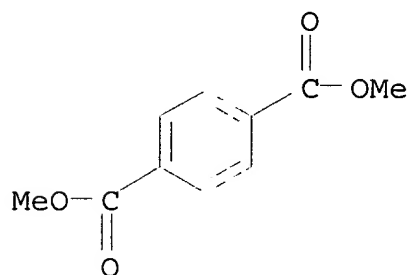
CM 2

CRN 121-91-5
CMF C8 H6 O4



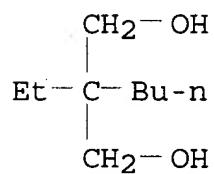
CM 3

CRN 120-61-6
CMF C10 H10 O4



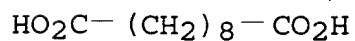
CM 4

CRN 115-84-4
CMF C9 H20 O2



CM 5

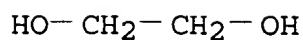
CRN 111-20-6
CMF C10 H18 O4



CM 6

CRN 107-21-1

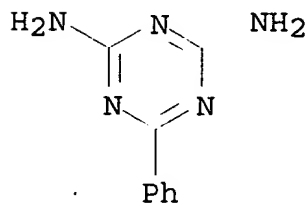
CMF C2 H6 O2



CM 7

CRN 91-76-9

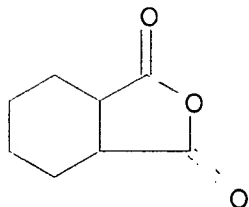
CMF C9 H9 N5



CM 8

CRN 85-42-7

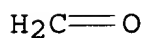
CMF C8 H10 O3



CM 9

CRN 50-00-0

CMF C H2 O



RN 211561-53-4 HCA

CN 1,3-Benzenedicarboxylic acid, polymer with 2-butyl-2-ethyl-1,3-propanediol, 1,2-ethanediol, formaldehyde, hexahydro-1,3-isobenzofurandione, 1,3-isobenzofurandione, Pespol HP 1000 and 6-phenyl-1,3,5-triazine-2,4-diamine (9CI) (CA INDEX NAME)

CM 1

CRN 186673-41-6

CMF Unspecified

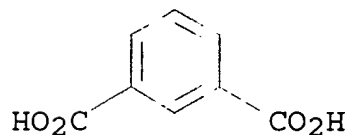
CCI MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

CM 2

CRN 121-91-5

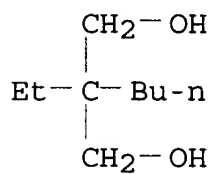
CMF C8 H6 O4



CM 3

CRN 115-84-4

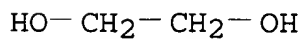
CMF C9 H20 O2



CM 4

CRN 107-21-1

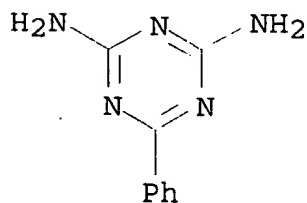
CMF C2 H6 O2



CM 5

CRN 91-76-9

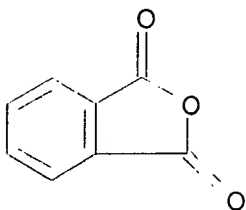
CMF C9 H9 N5



CM 6

CRN 85-44-9

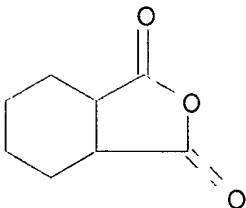
CMF C8 H4 O3



CM 7

CRN 85-42-7

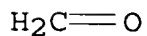
CMF C8 H10 O3



CM 8

CRN 50-00-0

CMF C H2 O



IC ICM C08G063-181

ICS B05D001-36; B05D007-14; B05D007-24; C09D161-22; C09D167-02

CC 42-8 (Coatings, Inks, and Related Products)

Section cross-reference(s): 55, 56

IT Polyesters, uses

(aminoplast-**crosslinked**; polyesters for can coatings with good processability and wet-on-wet coating process)IT **Coating process**

(two-layer-one-bake; polyesters for can coatings with good processability and wet-on-wet coating process)

IT 211561-52-3P 211561-53-4P

(polyesters for can coatings with good processability and wet-on-wet coating process)

L43 ANSWER 6 OF 14 HCA COPYRIGHT 2002 ACS

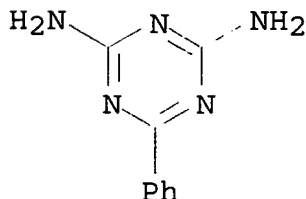
127:320094 Liquid thermoset sealers and sealing process for molded plastics. Kausch, Charles M.; Livigni, Russell A.; Melby, Earl G.; Sharma, Satish C. (Cambridge Industries, Inc., USA). U.S. US 5674565 A 19971007, 7 pp. Cont. of U. S. Ser. No. 81,767, abandoned. (English). CODEN: USXXAM. APPLICATION: US 1994-361913 19941222. PRIORITY: US 1993-81767 19930623.

AB Porous surfaces that can be generated during the manufg. and processing of molded plastic parts are sealed by applying liq. thermoset coatings to preheated (49-204.degree.) parts and curing to create a barrier on the surface to gasses generated during heat curing of subsequently applied **surface coatings**. The liq. thermosetting compn. consists essentially of (a) an unsatd. polyester resin and/or a vinyl ester resin; .gtoreq.1 **crosslinking** ethylenically unsatd. monomer; and an initiator, optionally with an accelerator or mixt. of accelerators; or (b) a reaction product of .gtoreq.1 polyisocyanate with .gtoreq.1 member selected from the group consisting of polyols, polyamines, polymercaptans, and polycarboxylic acids; or (c) the reaction product of (b) and a **crosslinker** having functionality greater than 2 selected from species reactive with isocyanate; or (d) combinations of (a) and (b); or (e) a satd. polyester, polyether, or acrylic resin contg. .gtoreq.2 hydroxyl and/or carboxyl groups per mol. along with an alkylated urea-formaldehyde resin, melamine-formaldehyde resin, or benzoguanamine-formaldehyde resin, and optional components selected from the group consisting of fillers, conductive pigments, antioxidants, pigments, moisture scavengers, low profile additives, and diluents.

IT 26160-89-4, Benzoguanamine-formaldehyde resin
(liq. thermoset sealers and sealing process for molded plastics)
RN 26160-89-4 HCA
CN Formaldehyde, polymer with 6-phenyl-1,3,5-triazine-2,4-diamine (9CI)
(CA INDEX NAME)

CM 1

CRN 91-76-9
CMF C9 H9 N5



CM 2

CRN 50-00-0
CMF C H2 O

H₂C=O

IC ICM B05D001-38

ICS B05D003-02

NCL 427258000

CC 42-11 (Coatings, Inks, and Related Products)

IT **Coating process**

Sealing compositions

(liq. thermoset sealers and sealing process for molded plastics)

IT 101-68-8 103-71-9, Phenyl isocyanate, uses 9003-08-1,
Melamine-formaldehyde resin 9003-20-7, LP-90 9011-05-6,
Urea-formaldehyde resin 9051-49-4, PEP 550 25101-03-5,
Poly(propylene adipate) 25190-06-1 25322-69-4 **26160-89-4**
, Benzoguanamine-formaldehyde resin 27083-66-5, Polypropylene
fumarate 27813-02-1, Hydroxypropyl methacrylate 27941-08-8,
Poly(propylene adipate) 37278-49-2, Polypropylene fumarate, sru
39394-41-7, Isonate 143L 55818-57-0, Bisphenol A-epichlorohydrin
copolymer, acrylate 79793-81-0, Adipic acid-1,4-
cyclohexanedimethanol-2,2-dimethyl-1,3-propanediol-phthalic
anhydride-trimethylolpropane copolymer 172964-74-8, Isonate 2191
197592-44-2, Lupranate M

(liq. thermoset sealers and sealing process for molded plastics)

L43 ANSWER 9 OF 14 HCA COPYRIGHT 2002 ACS

106:178205 Nonstaining coatings for microwave oven cookwares. (du Pont
de Nemours, E. I., and Co., USA). Jpn. Kokai Tokkyo Koho JP
61288815 A2 19861219 Showa, 4 pp. (Japanese). CODEN: JKXXAF.
APPLICATION: JP 1986-121365 19860528. PRIORITY: US 1985-739585
19850530.

AB Cookware comprising a glass fiber-reinforced thermosetting polyester
substrate, a primer contg. an epoxy resin, a **crosslinking**
resin, a curing catalyst, and optionally a coloring material, and a
topcoat prepd. from 12-33 mol% Me Ph silicone resin (1:1-1.25 Me/Ph
molar ratio) and 67-88 mol% Me Ph silicone resin (1:1.75-2.25 Me/Ph
molar ratio) is suitable for microwave oven use. Thermosetting
polyester cookware was spray coated with a mixt. of Epon 1007
268.93, benzoguanamine-formaldehyde copolymer 39.78, a
pigment-dispersed melamine resin 306.98, dodecylbenzenesulfonic acid
0.72, Modaflow 7.23, acetone 99.82, and MIBK 144.60, spray coated
with a mixt. of a 50% xylene soln. of silicone (Silikophen 300)
422.83, a silicone emulsion [prepd. from a silicone resin (DC6-2230)
12.69, Silikophen 300 (50% xylene soln.) 75.11, and diatomaceous
earth 11.20 parts] 369.91, MIBK 68.04, Zn octoate 3.93, Bu titanate
3.93, and pigment-coated mica flakes (Afflair) 4.39 parts, and dried
15 min at 221.degree. to give coated cookware having nonstaining
property (i.e., remained clean after 12 cookings of hamburger in a
microwave oven).

IT 108090-71-7

(coatings, primers, for thermosetting polyester microwave oven
cookware, nonstaining)

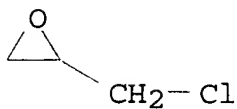
RN 108090-71-7 HCA

CN Formaldehyde, polymer with (chloromethyl)oxirane,
4,4'-(1-methylethylidene)bis[phenol] and 6-phenyl-1,3,5-triazine-2,4-
diamine (9CI) (CA INDEX NAME)

CM 1

CRN 106-89-8

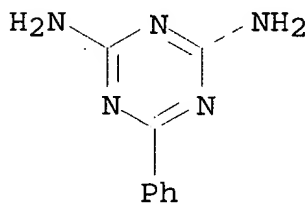
CMF C3 H5 Cl O



CM 2

CRN 91-76-9

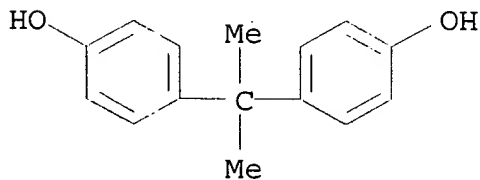
CMF C9 H9 N5



CM 3

CRN 80-05-7

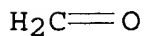
CMF C15 H16 O2



CM 4

CRN 50-00-0

CMF C H2 O

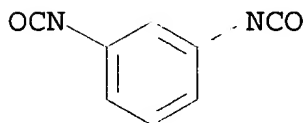


- IC ICM A47J036-04
ICS B32B027-00
- CC 42-9 (Coatings, Inks, and Related Products)
Section cross-reference(s): 38
- IT Cooking utensils
(for microwave ovens, nonstaining, polyester **substrates coated** by epoxy resin primer and siloxane topcoats as)
- IT Ovens
(microwave, nonstaining cookware for, polyester **substrates coated** by epoxy resin primer and siloxane topcoats as)
- IT **Coating materials**
(primers, epoxy resins, for thermosetting polyester microwave oven cookware, nonstaining)
- IT **Coating materials**
(topcoats, siloxanes, for thermosetting polyester microwave oven cookware, nonstaining)
- IT **108090-71-7**
(coatings, primers, for thermosetting polyester microwave oven cookware, nonstaining)
- L43 ANSWER 10 OF 14 HCA COPYRIGHT 2002 ACS
101:74412 Photosensitive coating materials. (Asahi Chemical Industry Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 58204060 A2 19831128 Showa, 6 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1982-87298 19820525.
- AB Photosensitive coating materials contain (1) a photocurable component composed of (a) an epoxy (meth)acrylate prepolymer or a (meth)acrylic acid ester prepolymer having ethylenic unsatd. moieties on both ends, (b) a urethane acrylate prepolymer, and (c) a monomer contg. ethylenically unsatd. moieties; (2) 0.2-10 wt.% (based on the photocurable component) of a photopolymer. initiator; (3) 0.1-3 wt.% unsatd. silane (4) 0.2-5 wt.% unsatd. phosphate ester; and (5) 1-30 wt.% 2,4-diamino-6-phenyl-1,3,5-triazine (I). The coating materials show good adhesion to metals, anticorrosion characteristics, high resistance to chem. and heat, and are useful as photosensitive paints and inks. Thus, a bisphenol A epoxy acrylate (SP 1509), tetramethylolmethane triacrylate, Bu₂Sn dilaurate, and tolylene diisocyanate reacted to give a urethane acrylate prepolymer (II). A Cu foil was coated with a compn. contg. SP 1509, II, trimethylolpropane triacrylate, 2-hydroxyethyl methacrylate, Irgacure 651 [24650-42-8], 1-chloroanthraquinone [82-44-0], 2-ethylanthraquinone [84-51-5], mono(2-methacryloyloxyethyl) phosphate, I, (3-methacryloyloxypropyl)trimethoxysilane, phthalocyanine green, and talc to give a photosensitive plate, which was exposed to light to cure the layer.
- IT **91029-80-0**
(coatings, photocurable, anticorrosive, on copper)
- RN 91029-80-0 HCA
- CN 2-Propenoic acid, 2-methyl-, 2-hydroxyethyl ester, polymer with 1,3-diisocyanatomethylbenzene, 2-ethyl-2-[[[1-oxo-2-

propenyl)oxy)methyl]-1,3-propanediyl di-2-propenoate,
 2-(hydroxymethyl)-2-[[[(1-oxo-2-propenyl)oxy)methyl]-1,3-propanediyl
 di-2-propenoate, (1-methylethylidene)bis[4,1-phenyleneoxy(2-hydroxy-
 3,1-propanediyl)] di-2-propenoate, 6-phenyl-1,3,5-triazine-2,4-
 diamine, 2-(phosphonoxy)ethyl 2-methyl-2-propenoate and
 3-(trimethoxysilyl)propyl 2-methyl-2-propenoate (9CI) (CA INDEX
 NAME)

CM 1

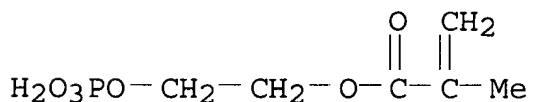
CRN 26471-62-5
 CMF C9 H6 N2 O2
 CCI IDS
 CDES 8:ID



D1-Me

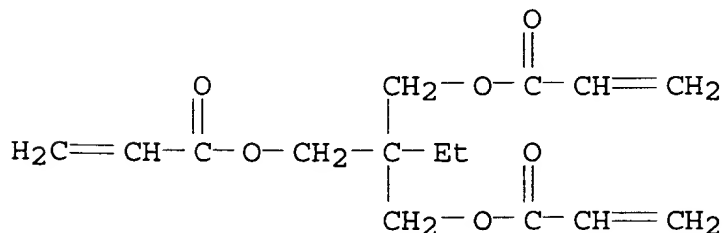
CM 2

CRN 24599-21-1
 CMF C6 H11 O6 P



CM 3

CRN 15625-89-5
 CMF C15 H20 O6

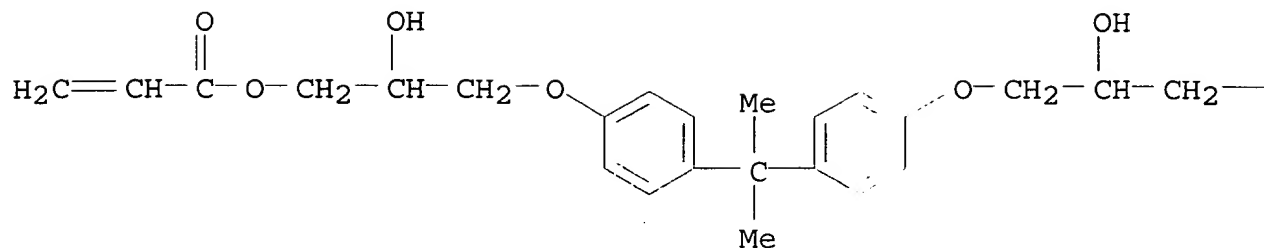


CM 4

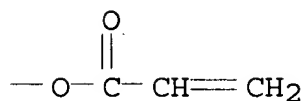
CRN 4687-94-9

CMF C27 H32 O8

PAGE 1-A



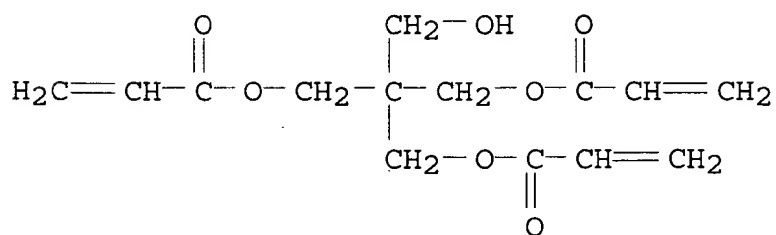
PAGE 1-B



CM 5

CRN 3524-68-3

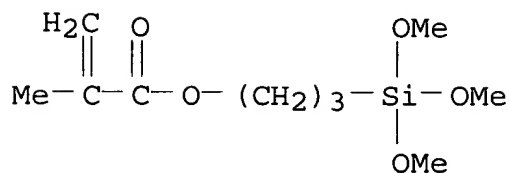
CMF C14 H18 O7



CM 6

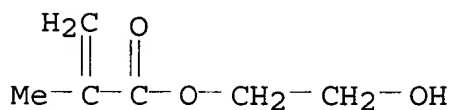
CRN 2530-85-0

CMF C10 H20 O5 Si



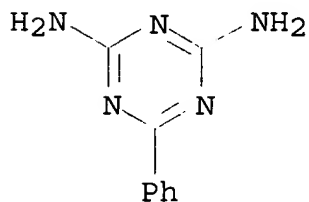
CM 7

CRN 868-77-9
CMF C6 H10 O3



CM 8

CRN 91-76-9
CMF C9 H9 N5



IC C09D005-00
ICA C08F002-48; C08F299-02; C08F299-06
CC 42-7 (Coatings, Inks, and Related Products)
Section cross-reference(s): 56, 74
IT **Coating materials**
(anticorrosive, chem.- and heat-resistant, paints, photocurable, acrylic polyurethane-based, on metals)
IT Chemically resistant materials
Heat-resistant materials
(**coatings**, acrylic polyurethane-based, for metals)
IT **Crosslinking** catalysts
(photochem., benzil dimethoxyketal, for acrylic polyurethane coatings)
IT 91029-80-0
(coatings, photocurable, anticorrosive, on copper)

98:91118 Electrocoating composition with polyhydroxyamine and polybutadiene. Hazan, Isidor (du Pont de Nemours, E. I., and Co., USA). U.S. US 4335031 A 19820615, 10 pp. Cont.-in-part of U.S. Ser. No. 106,254, abandoned. (English). CODEN: USXXAM. APPLICATION: US 1980-220953 19801229. PRIORITY: US 1979-106254 19791221.

AB Cathodic electrophoretic coatings are prepd. contg. glycidyl carboxylate-grafted, OH- and NH₂-functional acrylic polymers. Thus, 860 parts of a clear dispersion prepd. from tert-butylaminoethyl methacrylate-Cardura E 10-Et acrylate-hydroxyethyl methacrylate copolymer [84726-50-1] 102.53, nonylphenol-modified DER 661 136.70, XM 1125 [26160-89-4] 99.92, 85% lactic acid 6.59, and deionized water 514.26 parts was mixed with 105 parts of a pigment paste prepd. from tert-butylaminoethyl methacrylate-Et acrylate-hydroxyethyl methacrylate copolymer [71957-58-9] 16.45, ethylene glycol monoethyl ether 4.03, 85% lactic acid 3.03, deionized water 24.74, Mg silicate 20.85, Pb silicochromate 10.79, Pb silicate 22.8, and carbon black 2.32 parts and 880 parts deionized water. The electrocoating compn. had Ph 6.3-6.8, cond. 700-1000 .mu.mohs, pigment-to-binder ratio 25/100 and solids content about 24%. Coatings (15-20-.mu.-thick) deposited at 20-35.degree. and 150-400 V for 2 min and baked 30 min at 160.degree. had excellent adhesion to cold rolled steel and phosphated steel **panels** and acrylic **topcoats**.

IT 26160-89-4
(crosslinking agents for glycidyl carboxylate-grafted acrylic electrophoretic coatings)

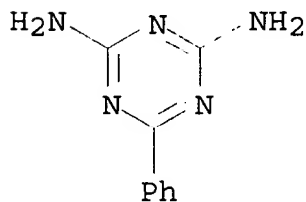
RN 26160-89-4 HCA

CN Formaldehyde, polymer with 6-phenyl-1,3,5-triazine-2,4-diamine (9CI)
(CA INDEX NAME)

CM 1

CRN 91-76-9

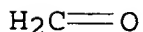
CMF C9 H9 N5



CM 2

CRN 50-00-0

CMF C H2 O



IC C08L029-02; C08L039-00
 NCL 524504000
 CC 42-7 (Coatings, Inks, and Related Products)
 Section cross-reference(s): 55, 56
 IT **Crosslinking** agents
 (benzoguanamine-formaldehyde copolymer, for glycidyl
 carboxylate-grafted acrylic polymer electrophoretic coatings)
 IT **Coating materials**
 (cathodic, contg. glycidyl carboxylate-grafted acrylic polymers)
 IT 26160-89-4
 (**crosslinking** agents for glycidyl carboxylate-grafted
 acrylic electrophoretic coatings)

L43 ANSWER 14 OF 14 HCA COPYRIGHT 2002 ACS
 76:128964 Coating media hardenable by electron irradiation. Masuda,
 Hiromasa; Nomura, Yukio; Fuyuki, Toru; Matsuzaka, Junichi (Japan
 Oils and Fats Co., Ltd.). Ger. Offen. DE 2132318 19720105, 43 pp.
 (German). CODEN: GWXXBX. PRIORITY: JP 1970-56786 19700629.

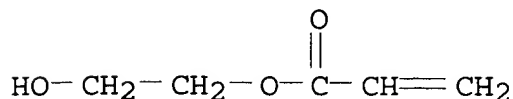
AB Electron-irradn.-curable **coatings** were **based** on
 maleic anhydride-dimethylaminoethyl methacrylate-.beta.-hydroxyethyl
 acrylate copolymer (I) [34521-29-4] and either a resin prepd. by
 treatment of tris(epoxypropyl) isocyanurate (II) [2451-62-9] with an
 acrylic acid or a resin prepd. from urea, melamine, benzoguanamine,
 or acetoguanamine and CH₂:CR₁CO₂CH₂CHR₂OH (R₁, R₂ = H, Me). For
 example, a resin component (A) was prepd. from II 444, Me
 methacrylate 214, hydroquinone 0.3, acrylic acid 308, and
 dimethylaminoethyl methacrylate 34 parts. A coating compn. was
 prepd. from A 350, I 650, beeswax 0.5, and satd. aliphatic
 hydrocarbon (m. 40.deg.) 0.2 part and the mixt. heated at 50.deg.
 and coated on wood flooring material and veneer wood and exposed to
 electron irradn. at 5 Mrad at 300 KV and 25 mA in air. The coating
 gave excellent results in the cross-hatch test; below av. abrasion
 resistance; above av. resistance to boiling water; excellent alkali
 and acid resistance; and excellent resistance to flaking. Approx.
 18 other coatings were prepd.

IT 36181-68-7
 (coatings, contg. **crosslinkable** polymers, hardening of,
 by electron radiation)

RN 36181-68-7 HCA
 CN 2-Propenoic acid, 2-hydroxyethyl ester, with formaldehyde and
 6-phenyl-1,3,5-triazine-2,4-diamine (9CI) (CA INDEX NAME)

CM 1

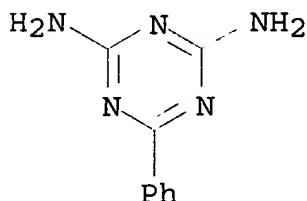
CRN 818-61-1
 CMF C5 H8 O3



CM 2

CRN 91-76-9

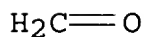
CMF C9 H9 N5



CM 3

CRN 50-00-0

CMF C H2 O



IC C09D

CC 42 (Coatings, Inks, and Related Products)

ST electron irradiation **crosslinkable** coating; maleic anhydride coating; polymethacrylate coating; trisepoxypropyl isocyanurate
IT **Coating materials**(acrylic polymers, **crosslinked** by electron radiation)

IT Electron beam, chemical and physical effects

(**crosslinking** by, of acrylic polymer coating materials)IT **Crosslinking**

(of acrylic copolymer coatings, by electron radiation)

IT Linseed oil

Safflower oil

Tung oil

(polymers with acrylic monomers, coatings, **crosslinked** by electron beams)

IT 2,5-Furandione, polymer with 2-(dimethylamino)ethyl

2-methyl-2-propenoate, 2-hydroxyethyl 2-propenoate and methyl

2-methyl-2-propenoate, polymers with drying oils

2,5-Furandione, polymer with 2-hydroxyethyl 2-methyl-2-propenoate and methyl 2-methyl-2-propenoate, polymers with drying oils

2,5-Furandione, polymer with 2-hydroxypropyl 2-propenoate and methyl 2-methyl-2-propenoate, polymers with drying oils

2-Propenoic acid, 2-hydroxyethyl ester, polymer with

2-(dimethylamino)ethyl 2-methyl-2-propenoate, 2,5-furandione and methyl 2-methyl-2-propenoate, polymers with drying oils

2-Propenoic acid, 2-hydroxypropyl ester, polymer with 2,5-furandione and methyl 2-methyl-2-propenoate, polymers with drying oils

2-Propenoic acid, 2-methyl-, 2-(dimethylamino)ethyl ester, polymer

with 2,5-furandione, 2-hydroxyethyl 2-propenoate and methyl 2-methyl-2-propenoate, polymers with drying oils

2-Propenoic acid, 2-methyl-, 2-hydroxyethyl ester, polymer with 2,5-furandione and methyl 2-methyl-2-propenoate, polymers with drying oils

2-Propenoic acid, 2-methyl-, methyl ester, polymer with 2,5-furandione and 2-hydroxyethyl 2-methyl-2-propenoate, polymers with drying oils

2-Propenoic acid, 2-methyl-, methyl ester, polymer with 2,5-furandione and 2-hydroxypropyl 2-propenoate, polymers with drying oils

2-Propenoic acid, 2-methyl-, methyl ester, polymer with 2-(dimethylamino)ethyl 2-methyl-2-propenoate, 2,5-furandione and 2-hydroxyethyl 2-propenoate, polymers with drying oils (coatings, contg. **crosslinkable** polymers, hardening of, by electron radiation)

IT 35625-60-6 36181-61-0 36181-64-3 36181-67-6 **36181-68-7**
36181-69-8

(coatings, contg. **crosslinkable** polymers, hardening of, by electron radiation)